

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG                      ELECTRIC LOGS   L     X   WATER SANDS                      LOCATION INSPECTED                      SUB. REPORT/abd                     

940215 Coastal to Columbia Gas eff. 2-10-94: 960806 Columbia Gas to Avicara Energy 5/96;  
 Confidential status Expired 12-1-94

DATE FILED **6-30-93**

LAND: FEE & PATENTED                      STATE LEASE NO. **ML-44333**

PUBLIC LEASE NO.                     

INDIAN                     

DRILLING APPROVED: **7-26-93**

SPUDDED IN: **T-23-93**

COMPLETED: **11-1-93 POW** PUT TO PRODUCING: **11-1-93**

INITIAL PRODUCTION: **97 BOPD; 118 BWPD**

GRAVITY A.P.I.                     

GOR:                     

PRODUCING ZONES: **16830-16878 (C.N.C.R.)**

TOTAL DEPTH: **7426 + TVD**

WELL ELEVATION: **5147 GR**

DATE ABANDONED:                     

FIELD: **WILDCAT**

UNIT: **KANE SPRINGS**

COUNTY: **GRAND**

WELL NO. **KANE SPRINGS 16-1**

API NO. **43-019-31341**

LOCATION **960' FSL** FT. FROM (N) (S) LINE, **1960' FWL** FT. FROM (E) (W) LINE, **SE SW** 1/4 - 1/4 SEC. **16'**

**PH: 5978' FSL** **948.4' FWL**

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
25S	18E	16	Avicara Energy Corp. <del>COASTAL OIL &amp; GAS CORP.</del> <del>COLUMBIA GAS DEVELOPMENT</del>				

## GEOLOGIC TOPS:

QUATERNARY	Star Point	Chinle	Molas
Alluvium	Wahweap	Shinarump	Manning Canyon
Lake beds	Masuk	Moenkopi	Mississippian
Pleistocene	Colorado	Sinbad	Humbug
Lake beds	Sego	PERMIAN	Brazer
TERTIARY	Buck Tongue	Kaibab	Pilot Shale
Pliocene	Castlegate	Coconino	Madison
Salt Lake	Mancos	Cutler	Leadville
Oligocene	Upper	Hoskinnini	Redwall
Norwood	Middle	DeChelly	DEVONIAN
Eocene	Lower	White Rim	Upper
Duchesne River	Emery	Organ Rock	Middle
Uinta	Blue Gate	Cedar Mesa	Lower
Bridger	Ferron	Halgaita Tongue	Ouray
Green River	Frontier	Phosphoria	Elbert
	Dakota	Park City	McCracken
	Burro Canyon	Rico (Goodridge)	Aneth
	Cedar Mountain	Supai	Simonson Dolomite
	Buckhorn	Wolfcamp	Sevy Dolomite
	JURASSIC	CARBON I FEROUS	North Point
Wasatch	Morrison	Pennsylvanian	SILURIAN
Stone Cabin	Salt Wash	Oquirrh	Laketown Dolomite
Colton	San Rafael Gr.	Weber	ORDOVICIAN
Flagstaff	Summerville	Morgan	Eureka Quartzite
North Horn	Bluff Sandstone	Hermosa	Pogonip Limestone
Almy	Curtis		CAMBRIAN
Paleocene	Entrada	Pardox	Lynch
Current Creek	Moab Tongue	Ismay	Bowman
North Horn	Carrhel	Desert Creek	Tapeats
CRETACEOUS	Glen Canyon Gr.	Akah	Ophir
Montana	Navajo	Barker Creek	Tintic
Mesaverde	Kayenta		PRE - CAMBRIAN
Price River	Wingate	Cane Creek	
Blackhawk	TRIASSIC		

# **AVIARA**

**ENERGY CORPORATION**

**JON NORMAN**

**SENIOR GEOLOGIST**

One Riverway, Suite 700  
P. O. BOX 1350  
Houston, Tx. 77251-1350

TEL: (713) 871-3411  
FAX: (713) 871-3473

# **AVIARA**

**ENERGY CORPORATION**

**MARK D. SWISHER**

**STAFF PETROLEUM ENGINEER**

One Riverway, Suite 700  
P. O. BOX 1350  
Houston, Tx. 77251-1350

TEL: (713) 871-3413  
FAX: (713) 871-3489

# **AVIARA**

**ENERGY CORPORATION**

**DONNY W. WORTHINGTON, R.E.M., C.E.A.**

**MANAGER; ENVIRONMENTAL, SAFETY AND REGULATORY AFFAIRS**  
**CERTIFIED WILDLIFE BIOLOGIST**

One Riverway, Suite 700  
P. O. BOX 1350  
Houston, Tx. 77251-1350

TEL: (713) 871-3445  
FAX: (713) 871-3478

RECEIVED

MAY 20 1993

DIVISION OF OIL GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
3 TRIAD CENTER, SUITE 350  
SALT LAKE CITY, UT 84180-1203

43019 31334

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Kane Springs Federal #25-19-34-1  
Operator Columbia Gas Development Corp. Address P.O. Box 1350, Houston, TX 77251  
Contractor Forwest Rig 6 Address Houston, Texas  
Location NW 1/4 NE 1/4 Sec. 34 T. 25S R. 19E County Grand

Water Sands

	<u>Depth</u>		<u>Volume</u>	<u>Quality</u>
	From	To	Flow Rate or Head	Fresh or Salty
1.	2185		Would not Flow.	Salty
2.				
3.	Encountered saltwater at 2185' while air drilling. Changed over to foam air			
4.	mist to casing point @ 4389'			
5.				

(Continue on reverse side if necessary)

Formation Tops 1st Lime - 2167' Est.  
Honaker Trail - 2615' Est.

Remarks

- NOTE: (a) Report on this form as provided for in Rule 806, Oil and Gas Conservation General Rules.
- (b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. Type of Work  
 DRILL                       DEEPEN                       PLUG BACK

b. Type of Well  
 Oil Well                       Gas Well                       Other                       Single Zone                       Multiple Zone

2. Name of Operator  
 Coastal Oil & Gas Corporation

3. Address of Operator  
 P. O. Box 749                      Denver, CO 80201-0749                      (303) 573-4476

4. Location of Well (Report location clearly and in accordance with any State requirements.)\*  
 At surface                      960' FSL & 1960' FWL  
 At proposed prod. zone                      460' FWL & 1360' FNL

14. Distance in miles and direction from nearest town or post office\*  
 Twenty-six (26) miles northwest of Moab, Utah.

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any)  
 Surface                      1960'                      BHL                      460'

16. No. of acres in lease                      640

17. No. of acres assigned to this well                      N/A (Federal Unit)

18. Distance from proposed location\* to nearest well, drilling, completed, or applied for, on this lease, ft.                      ±6100'

19. Proposed depth                      7805' TVD/ 10226' MD

20. Rotary or cable tools                      Rotary

21. Elevations (Show whether DF, RT, GR, etc.)                      5143' Ungrd GR

22. Approx. date work will start\*                      ASAP

3. Lease Designation and Serial No.  
 ML-44333

6. If Indian, Allottee or Tribe Name  
 N/A

7. Unit Agreement Name  
 Kane Springs Fed. Unit

8. Farm or Lease Name  
 Kane Springs Unit

9. Well No.  
 16-1

10. Field and Pool, or Wildcat  
 Wildcat

11. QO, Sec., T., R., M., or Bk. and Survey or Area  
 SE/SW Section 16, T25S-R18E

12. County or Parrish                      13. State  
 Grand                      Utah

**PROPOSED CASING AND CEMENTING PROGRAM**

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
17-1/2"	13-3/8"	54.5#	750'	780 sx to surface*
12-1/4"	10-3/4"	51#	±4850'	750 sx to 450'*
9-1/2"	7-5/8"	39#	±4400'-8500'	650 sx to 4400'*
6-1/2"	5"	18#	±8200'-10226'	Uncemented

\*Cement volumes may change due to hole size. Calculate from caliper log.

Please see the attached drilling prognosis.

RECEIVED

JUN 30 1993

DIVISION OF  
OIL GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed: Eileen Danni Dey Title: Regulatory Analyst Date: 6/25/93

(This space for Federal or State office use)

API NO. 43-019-31341 Approval Date \_\_\_\_\_

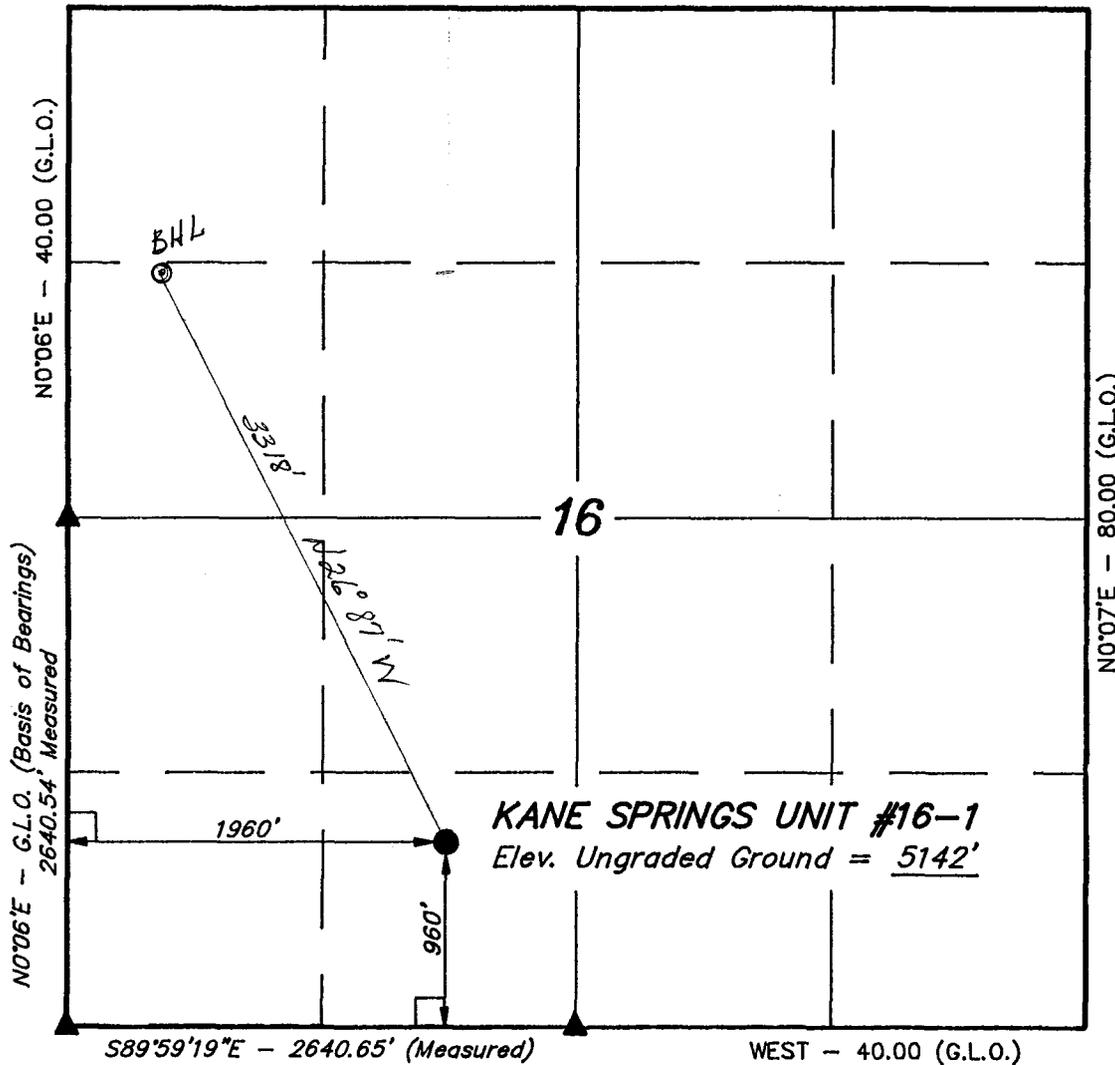
Approved by \_\_\_\_\_ Title \_\_\_\_\_

Conditions of approval, if any: \_\_\_\_\_

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 7/26/93  
BY: [Signature]  
WELL SPACING 649-2-3

# T25S, R18E, S.L.B.&M.

WEST - 80.40 (G.L.O.)



**KANE SPRINGS UNIT #16-1**  
Elev. Ungraded Ground = 5142'

**LEGEND:**

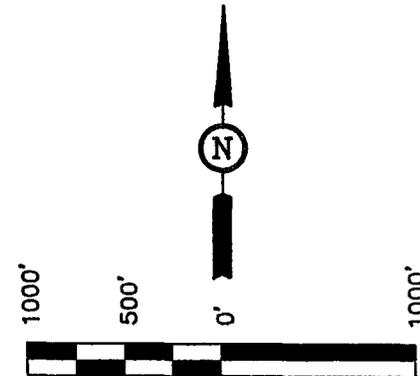
- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED. (Brass Caps)

## COASTAL OIL & GAS

Well located, KANE SPRINGS UNIT #16-1, located as shown in the SE1/4 SW1/4, of Section 16, T25S, R18E, S.L.B.&M. Grand County, Utah.

### BASIS OF ELEVATION

WHITE VABM LOCATED IN THE EAST 1/2 OF SECTION 9, T25S, R18E, S.L.B.&M. TAKEN FROM THE DUBINKY WASH QUADRANGLE, UTAH, GRAND COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5484 FEET.



SCALE

CERTIFICATE OF REGISTERED LAND SURVEYOR  
 THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.  
*[Signature]*  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 5309  
 STATE OF UTAH

**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (801) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 6-24-93	DATE DRAWN: 6-25-93
PARTY D.A. K.K. J.D.G.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE COASTAL OIL & GAS	

COASTAL OIL & GAS CORPORATION

Kane Springs Unit #16-1  
SE/SW Section 16, T25S-R18E  
Grand County, Utah

Drilling Prognosis

1. Estimated Tops of Important Geologic Markers from Estimated KB:

Kayenta	Surface
Honaker Trail	2,784'
Ismay	4,239'
Top of Salt	4,344'
Kickoff Point	6,725'
Alkali Gulch	6,905'
EC21	7,032'
Cane Creek "A"	7,165'
Cane Creek "B"	7,205'
Total Depth	7,805' TVD / 10,226' MD

2. Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations:

Cane Creek                      7,205'              Oil (Primary Objective)

All freshwater and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment: (Schematic Attached)

Type                      :    13<sup>5</sup>/<sub>8</sub>" Double Gate Hydraulic with one (1) blind ram (above) and one (1) pipe ram (below), one (1) 13<sup>5</sup>/<sub>8</sub>" single gate hydraulic and 13<sup>5</sup>/<sub>8</sub>" Annular Preventer; equipped with automatic choke and manifold.

Pressure Rating    :    10,000 psi BOP, 10,000 psi choke manifold, 5,000 psi Annular Preventer and 10,000 psi casing head.

4. Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0- 750'	Air/Mist	N/A	N/A	N/A
750- 4,850'	Air/Mist	N/A	N/A	N/A
4,850- 7,205' MD	Oil Base	9.6-12.5	42-46	< 10cc's
7,205-10,226' MD	Oil Base	12.5-18.5	42-47	< 4cc's

5. Evaluation Program:

- Logs : Induction/Sonic/GR - 4,850-6,715'  
BHC-Sonic-GR - 4,850-6,715'  
MWD-Induction/GR will be run in the build and the  
horizontal section 6,715-10,226' MD.
- DST's : None anticipated.
- Cores : A 30' oriented core may be attempted in the Cane  
Creek formation.

Evaluation Program may change at the discretion of the wellsite geologist.

COASTAL OIL & GAS CORPORATION

Kane Springs Unit #16-1  
SE/SW Section 16, T25S-R18E  
Grand County, Utah

Supplement to Application for Permit to Drill

1. Location and Type of Water Supply:

- A. Coastal Oil & Gas Corporation will obtain water from a permitted source. Utah Division of Oil, Gas & Mining will be notified of the source.

2. Methods of Handling Water Disposal:

- A. Sewage - self-contained, chemical toilets will be provided for human waste disposal. Upon completion of operations, the holding tanks will be pumped and the contents disposed of in a municipal sewage treatment facility or other authorized disposal facility.
- B. Garbage and other waste materials - all trash will be contained in a portable trash cage. Upon completion of operations, all trash will be hauled to an approved sanitary landfill.
- C. Cuttings and drilling fluids - the cuttings will be deposited in the reserve pit. Drilling fluids will be contained in the reserve pit and allowed to evaporate. The reserve pit will be designed to prevent the collection of surface runoff and will be constructed with a minimum of one-half (1/2) the total depth below the original ground surface on the lowest point within the pit. The reserve pit will be lined.

3. Plans for Reclamation of the Surface:

- A. Backfilling, leveling and re-contouring are planned as soon as the reserve pit dries. Waste and spoil materials will be disposed of immediately upon completion of drilling and workover activities. If production is established, the unneeded areas of the location will be reclaimed as soon as the reserve pit dries.
- B. Upon completion of backfilling, leveling and re-contouring, the stock-piled topsoil will be evenly spread over the reclaimed area(s). All disturbed surfaces (including access road and well pad areas) will be reseeded using the seed mixture recommended by the Surface Owner. Seed will be drilled on the contour to an approximate depth of 1/2 inch.
- C. Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock and wildlife from becoming entrapped, and the fencing will be maintained until leveling and cleanup are accomplished.
- D. If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with wire mesh.

Coastal Oil & Gas Corporation  
Kane Springs Unit #16-1  
Supplement to Application for Permit to Drill  
Page 2

3. Plans for Reclamation of the Surface: Continued

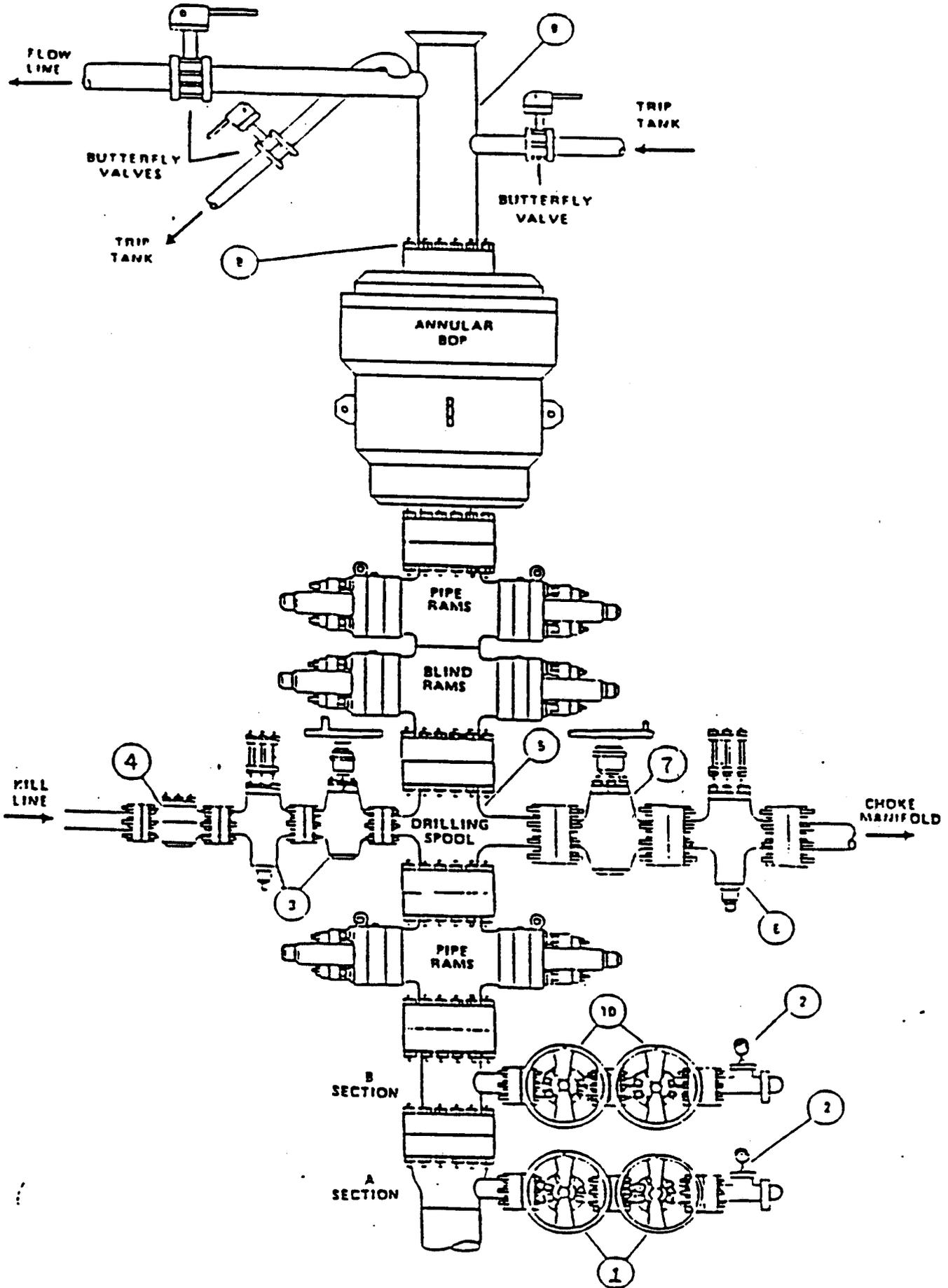
E. The reclamation operations will begin after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or the area will be flagged and fenced. Other cleanup will be done as needed. Rehabilitation operations should be completed by the Spring of 1994.

4. Other Information:

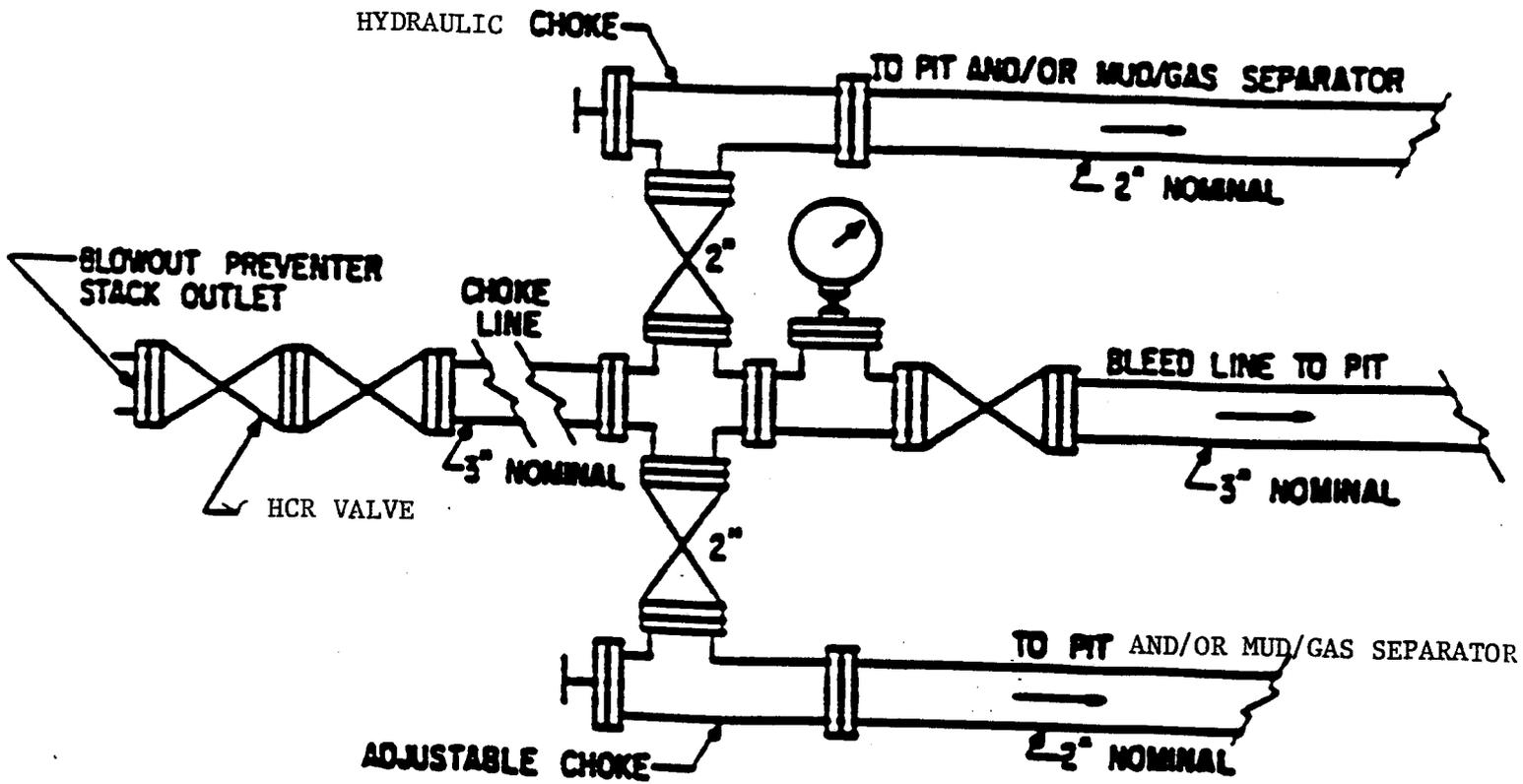
A. The surface is owned by:

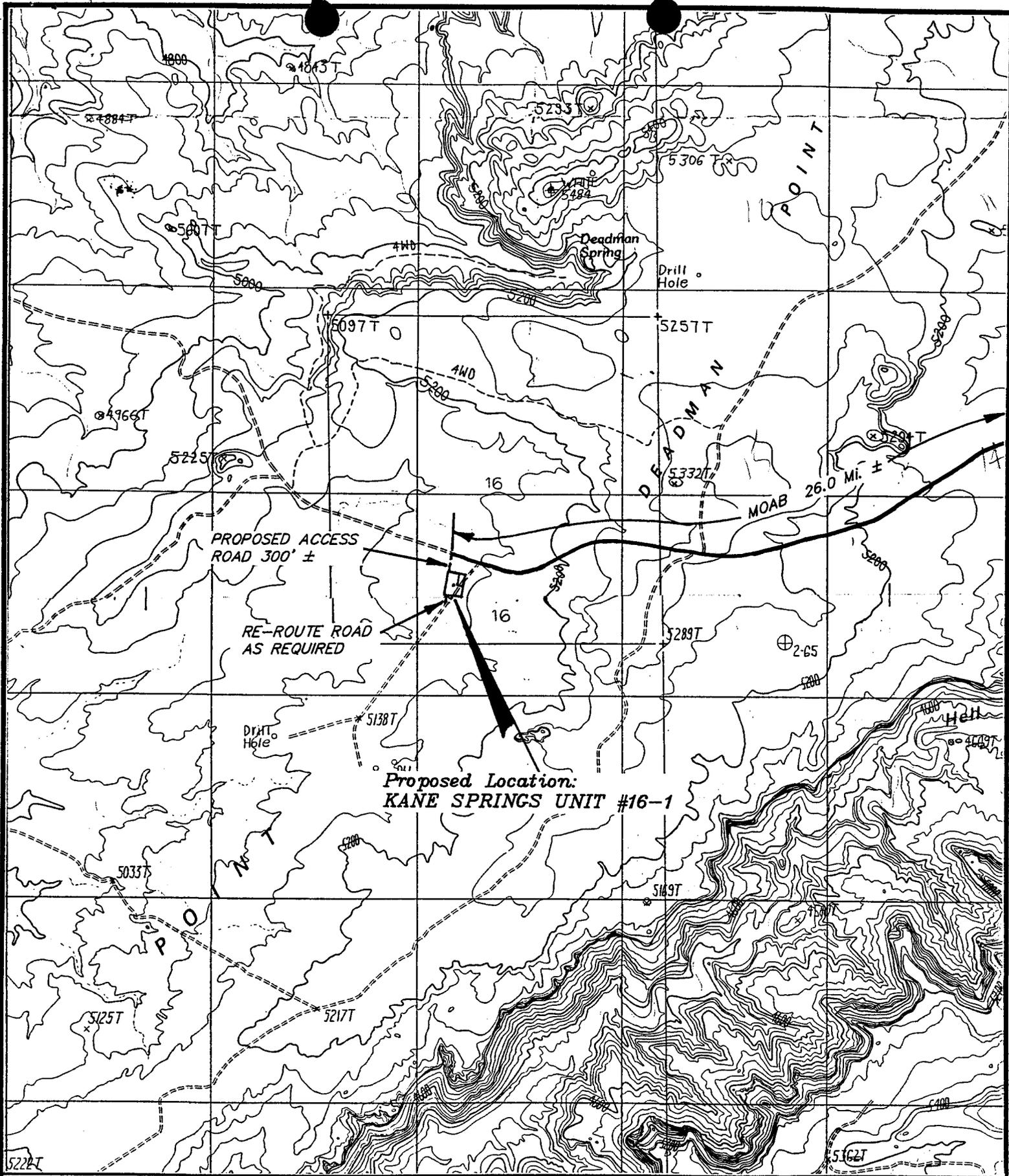
State of Utah  
3 Triad Center, Suite 400  
355 W. North Temple  
Salt Lake City, Utah 84180

# BOP STACK



# CHOKE MANIFOLD

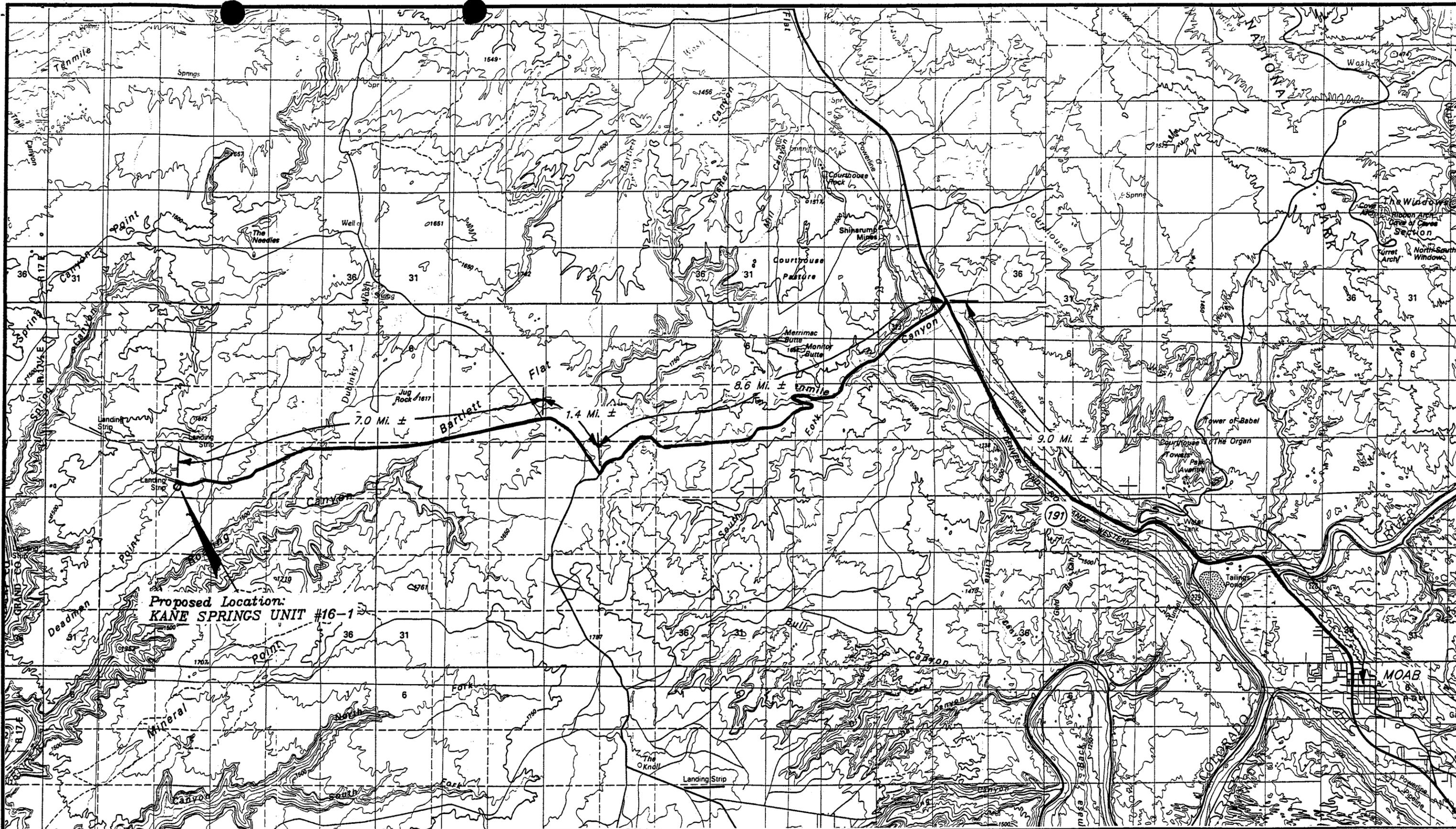




TOPOGRAPHIC  
 MAP "B"  
 SCALE: 1" = 2000'  
 DATE: 6-25-93 J.L.G.



COASTAL OIL & GAS CO.  
 KANE SPRINGS UNIT #16-1  
 SECTION 16, T25S, R18E, S.L.B.&M.  
 960' FSL 1960' FWL



**Proposed Location:  
KANE SPRINGS UNIT #16-1**

**TOPOGRAPHIC  
MAP "A"**

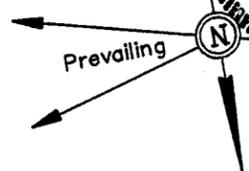
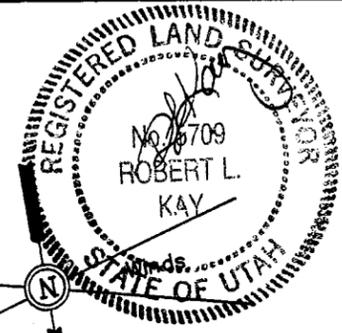
DATE: 6-25-93 J.L.G.



**COASTAL OIL & GAS CO.**

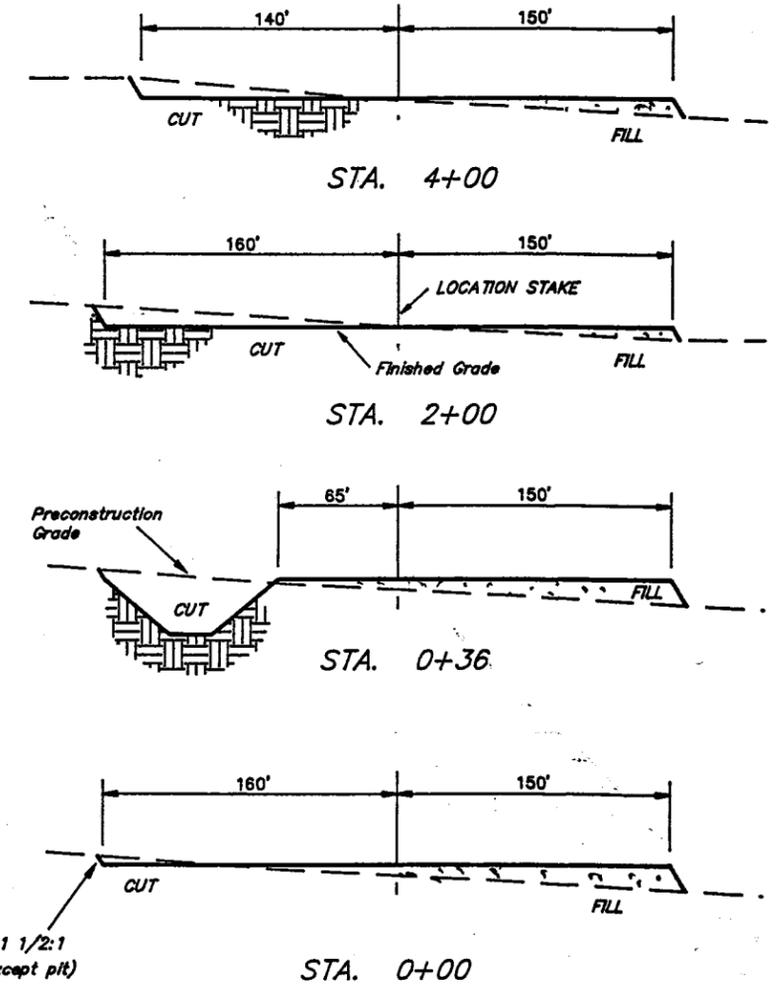
KANE SPRINGS UNIT #16-1  
SECTION 16, T25S, R18E, S.L.B.&M.  
960' FSL 1960' FWL

COASTAL OIL & GAS CORP.  
 LOCATION LAYOUT FOR  
 KANE SPRINGS UNIT #16-1  
 SECTION 16, T25S, R18E, S.L.B.&M.  
 960' FSL 1960' FWL



SCALE: 1" = 50'  
 DATE: 6-25-93  
 Drawn By: T.D.H.

X-Section Scale  
 1" = 40'  
 1" = 100'



Slope = 1 1/2:1  
 (Typ. except pit)

NOTE:  
 Topsoil should not be  
 Striped Below Finished  
 Grade on Substructure Area.

APPROXIMATE YARDAGES

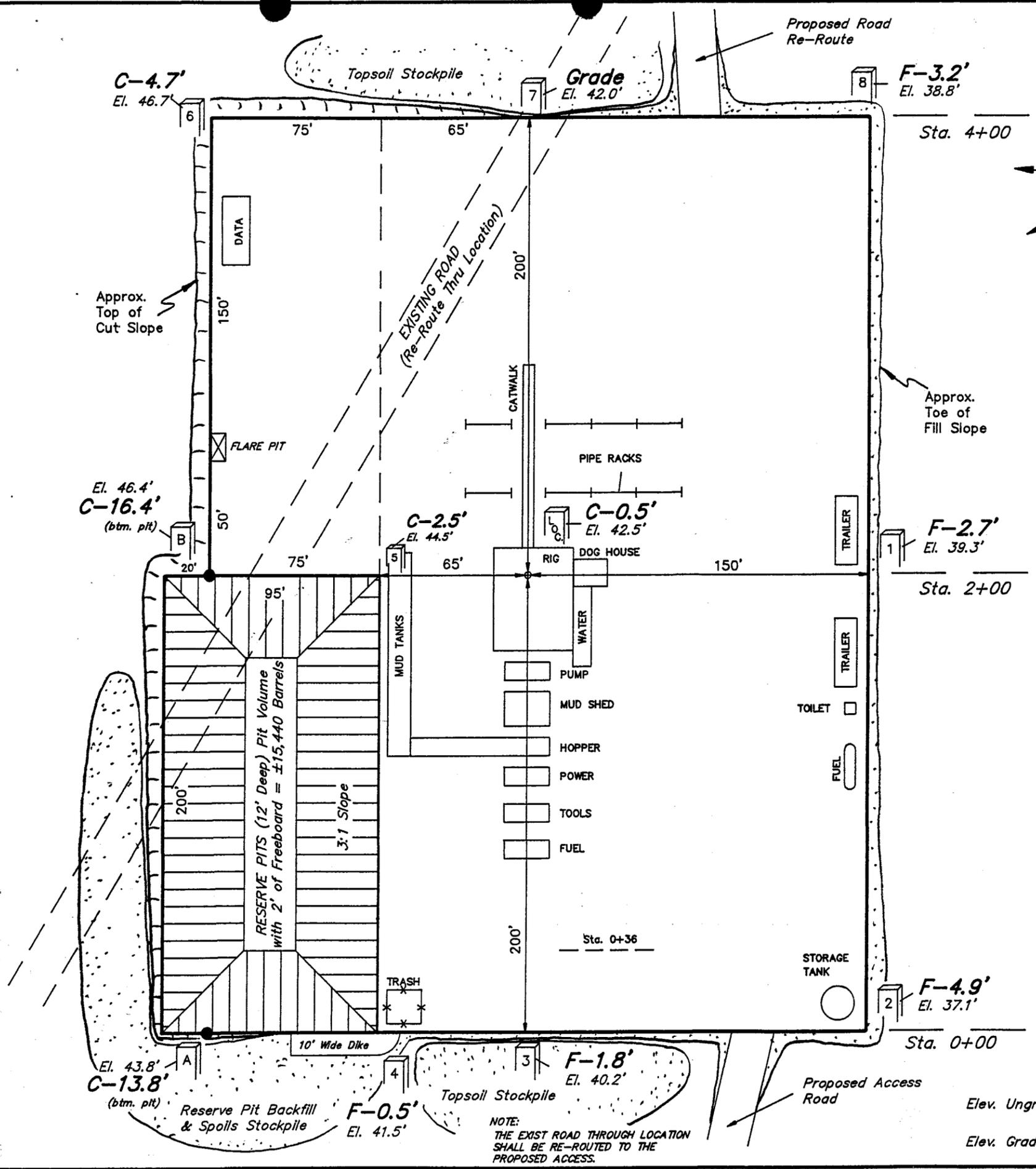
(6") Topsoil Stripping	=	2,220 Cu. Yds.
Remaining Location	=	8,060 Cu. Yds.
<b>TOTAL CUT</b>	<b>=</b>	<b>10,280 CU.YDS.</b>
<b>FILL</b>	<b>=</b>	<b>5,520 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	=	4,470 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	4,470 Cu. Yds.
<b>EXCESS MATERIAL</b>	<b>=</b>	<b>0 Cu. Yds.</b>

Elev. Ungraded Ground at Location Stake = 5142.5'

Elev. Graded Ground at Location Stake = 5142.0'

UINTAH ENGINEERING & LAND SURVEYING  
 85 So. 200 East Vernal, Utah



NOTE:  
 THE EXIST ROAD THROUGH LOCATION  
 SHALL BE RE-ROUTED TO THE  
 PROPOSED ACCESS.



MAYOR: TOM STOCKS  
COUNCIL MEMBERS: WILLIAM D. McDOUGALD  
DAN MICK  
DAVID SAKRISON  
PAUL SEIBERT  
TERRY WARNER  
RECORDER: JOHN W. WEST  
TREASURER: MARGET SNYDER, CMFA  
PUBLIC WORKS DIRECTOR: BRENT WILLIAMS  
WATER & SEWER LEADMAN: LARRY JOHNSON  
PARKS LEADMAN: TIM SHEETS  
STREETS LEADMAN: JACOB LYNN ZUFELT  
BUILDING INSPECTOR: PETE JOHNSON  
PLANNING COORDINATOR: DAVID OLSEN

**Moab City Police**  
82 North Main Street  
Moab, Utah 84532  
(801) 259-8938  
Police Chief: Alan West

FAX (801) 259-4135

## City of Moab

150 EAST CENTER STREET  
MOAB, UTAH 84532  
(801) 259-5121

June 30, 1993

Rodney Cox  
P.O. Box 749  
Denver, CO 80201

Dear Rodney:

The City of Moab grants permission for Coastal Oil and Gas to load water for their drilling and work over operations.

Sincerely,

*Brent Williams*  
Brent Williams *byLB*  
Public Works Director

RECEIVED  
FILING FOR WATER IN THE  
MAY 3 STATE OF UTAH

Rec. by JK  
Fee Rec. 3000  
Receipt # 30999  
Microfilmed \_\_\_\_\_  
Roll # \_\_\_\_\_

APPLICATION TO APPROPRIATE WATER  
SALT LAKE

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements to Title 73, Chapter 3 of the Utah Code Annotated (1953, as amended).

\*WATER RIGHT NO. 01 - 1082 \*APPLICATION NO. A 65409

1. \*PRIORITY OF RIGHT: May 22, 1991 \*FILING DATE: May 22, 1991

2. OWNER INFORMATION

Name(s): Able Trucking \*Interest: \_\_\_\_\_ %

Address: 2960 Desert Road

City: Moab State: Utah Zip Code: 84532

Is the land owned by the applicant? Yes \_\_\_\_\_ No X (If "No", please explain in EXPLANATORY section.)

3. QUANTITY OF WATER: \_\_\_\_\_ cfs and/or 20.0 ac-ft.

4. SOURCE: Colorado River \*DRAINAGE: \_\_\_\_\_

which is tributary to \_\_\_\_\_

which is tributary to \_\_\_\_\_

POINT(S) OF DIVERSION: \_\_\_\_\_ COUNTY: Grand

1) S. 1300 & E. 1800 from NW Cor. Sec. 26, T25S, R21E, SLB&M; 2) N. 300 & W. 1600 from SE Cor. Sec. 7, T23S, R24E, SLB&M; 3) S. 450 & W. 2775 from NE Cor. Sec. 22, T21S R24E, SLB&M; 4) N. 2300 & W. 175 from SE Cor. Sec. 24, T26S, R20E, SLB&M.

Description of Diverting Works: Portable pump to tank truck

\*COMMON DESCRIPTION: \_\_\_\_\_

5. POINT(S) OF REDIVERSION

The water will be rediverted from \_\_\_\_\_ at a point:

\_\_\_\_\_

Description of Diverting Works: \_\_\_\_\_

6. POINT(S) OF RETURN

The amount of water consumed will be \_\_\_\_\_ cfs or 20.0 ac-ft.

The amount of water returned will be \_\_\_\_\_ cfs or \_\_\_\_\_ ac-ft.

The water will be returned to the natural stream/source at a point(s): \_\_\_\_\_

\_\_\_\_\_

7. STORAGE

Reservoir Name: \_\_\_\_\_ Storage Period: from \_\_\_\_\_ to \_\_\_\_\_

Capacity: \_\_\_\_\_ ac-ft. Inundated Area: \_\_\_\_\_ acres.

Height of dam: \_\_\_\_\_ feet

Legal description of inundated area by 40 acre tract(s): \_\_\_\_\_

\_\_\_\_\_

\* These items are to be completed by the Division of Water Rights

8. List any other water rights which will supplement this application \_\_\_\_\_

9. NATURE AND PERIOD OF USE

Irrigation:	From _____	to _____
Stockwatering:	From _____	to _____
Domestic:	From _____	to _____
Municipal:	From _____	to _____
Mining:	From _____	to _____
Power:	From _____	to _____
Other:	From <u>January 1</u>	to <u>December 31</u>

10. PURPOSE AND EXTENT OF USE

Irrigation: \_\_\_\_\_ acres. Sole supply of \_\_\_\_\_ acres.  
 Stockwatering (number and kind): \_\_\_\_\_  
 Domestic: \_\_\_\_\_ Families and/or \_\_\_\_\_ Persons.  
 Municipal (name): \_\_\_\_\_  
 Mining: \_\_\_\_\_ Mining District in the \_\_\_\_\_ Mine.  
 Ores mined: \_\_\_\_\_  
 Power: Plant name: \_\_\_\_\_ Type: \_\_\_\_\_ Capacity: \_\_\_\_\_  
 Other (describe): Exploration drilling, road construction and maintenance.

11. PLACE OF USE

Legal description of place of use by 40 acre tract(s):  
1) NE 1/4 NW 1/4 Sec. 26, T25S, R21E, SLB&M - Moab Quad  
2) SW 1/4 SE 1/4 Sec. 7, T23S, R24E, SLB&M - Cisco Quad  
3) SE 1/4 NW 1/4 Sec. 22, T21S, R24E, SLB&M - Cisco Quad  
4) NE 1/4 SE 1/4 Sec. 24, T26S, R21E, SLB&M - Gold Bar Quad

12. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. (Use additional pages of the same size if necessary):  
This application is being filed for a Fixed Time period of five years.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

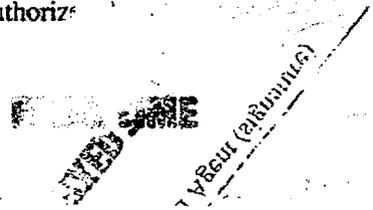
\*\*\*\*\*

The applicant(s) hereby acknowledges that he/she/they are a citizen(s) of the United States of America or intends to become such a citizen(s). The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purposes herein described. The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

Signature of Applicant(s)\*

\*If applicant is a corporation or other organization, signature must be the name of such corporation or other organization by its authorized agent, or in the name of the partnership by one of the partners.

YVETTE HESS  
 Authorized Agent  
Yvette Hess  
 Authorized



GENERAL COMMODITY AUTHORITY

VACUUM TRUCK WATER HAULING

Aable Trucking Company

Box 1443  
Moab, Utah 84532  
801-259-5886

Attn Rodney Cox  
Coastal Oil & Gas  
P.O. Box 749  
Denver Colo. 80201

6-30-93

Aable Trucking Company gives permission to Coastal Oil & Gas to use up to 3AL FT. of water out of the Colorado River if necessary to Drill their upcoming well. More water is available if necessary

A section 7 consultation has been approved on this water permit.

A Fee of 10.00 per load will be charged. We also need to Report how much water was drawn from the river when the well is finished ~~the~~ to the Utah State Engineer. Aable Trucking Co. will Report how much was used

Thanks  
Billy R. [Signature]

VACUUM TRUCK WATER HAULING

Cable Trucking Company

Box 1443

Moab, Utah 84532

801-259-5886

6-30-93

Attn Mark Page

Utah State Division of Nat. Resources  
Water Rights

I have given permission to Coastal Oil & Gas to use 3 acre feet of water from our permit to drill a well with on Dead Horse point we will load off the boat dock 2 mi North of Moab.

I believe their primary source will be from Moab City but Coastal Oil & Gas is more than welcome to use my permit we will report any water used

Thanks

Billy R. Hesse



**Coastal**  
The Energy People

**RECEIVED**

JUL 02 1993

DIVISION OF  
OIL GAS & MINING

June 30, 1993

State of Utah  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
355 W. North Temple  
Salt Lake City, Utah 84180-1203

Attention: Mr. Frank Matthews

Re: Coastal Oil & Gas Corporation's  
Application for Permit to Drill  
Kane Springs Unit #16-1  
Grand County, Utah  
*Sec 16 T255 R18E*

Gentlemen:

Pursuant to your request to Eileen Dey, please find the enclosed horizontal "plan" for inclusion with the "Application for Permit to Drill" the above referenced well.

Sincerely,

Tom C. Young  
Technical Manager

TCY:tmr

Enclosure

xc: R. Bartley/N. Shiflett/R. Cox/Well File  
E. Dey  
M. McAllister

**Coastal Oil & Gas Corporation**

A SUBSIDIARY OF THE COASTAL CORPORATION  
600 17TH STREET STE. 800 S • P O BOX 749 • DENVER CO 80201-0749 • 303/572-1121

**SPERRY-SUN DRILLING SERVICES**  
Western Region

**COASTAL OIL & GAS CORPORATION**

**Kane Springs #16-1**

**WELL PROPOSAL DATA**

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
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**Kick-Off Depth**

6715.00	0.00	0.00	6715.00	0.00	0.00	0.00	0.00
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**Build Angle to 65 Degrees @ 13.50/100' Build Rate**

6780.26	8.81	333.13	6780.00	4.47	-2.26	Top C-19	
6800.00	11.48	333.13	6799.43	7.57	-3.83	8.48	13.50
6847.12	17.84	333.13	6845.00	18.20	-9.22	Top E-20	
6900.00	24.98	333.13	6894.20	35.40	-17.94	39.69	13.50
6958.07	32.82	333.13	6945.00	60.41	-30.61	Top C-20	
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**Start Tangent Section**

7196.48	65.00	333.13	7099.65	218.59	-110.75	245.05	13.50
7200.00	65.00	333.13	7101.14	221.44	-112.20	248.24	0.00
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7300.00	66.04	333.13	7143.33	302.31	-153.17	338.90	12.87
7400.00	78.91	333.13	7173.38	387.19	-196.18	434.06	12.88

**Intersect Target TVD**

7447.30	85.00	333.13	7180.00	428.95	-217.33	480.86	12.88
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**Hold Angle at 85 Degrees to Total Depth**

7500.00	85.00	333.13	7184.59	475.78	-241.06	533.37	0.00
7600.00	85.00	333.13	7193.31	564.65	-286.09	632.99	0.00
7700.00	85.00	333.13	7202.03	653.51	-331.11	732.61	0.00
7800.00	85.00	333.13	7210.74	742.37	-376.14	832.23	0.00
7900.00	85.00	333.13	7219.46	831.24	-421.16	931.84	0.00
8000.00	85.00	333.13	7228.17	920.10	-466.19	1031.46	0.00
8100.00	85.00	333.13	7236.89	1008.97	-511.21	1131.08	0.00
8200.00	85.00	333.13	7245.60	1097.83	-556.24	1230.70	0.00
8300.00	85.00	333.13	7254.32	1186.69	-601.26	1330.32	0.00
8400.00	85.00	333.13	7263.03	1275.56	-646.29	1429.94	0.00
8500.00	85.00	333.13	7271.75	1364.42	-691.31	1529.56	0.00

**Grand County, Utah**

**SPERRY-SUN DRILLING SERVICES**  
*Western Region*

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
8600.00	85.00	333.13	7280.47	1453.29	-736.34	1629.18	0.00
8700.00	85.00	333.13	7289.18	1542.15	-781.36	1728.80	0.00
8800.00	85.00	333.13	7297.90	1631.01	-826.39	1828.42	0.00
8900.00	85.00	333.13	7306.61	1719.88	-871.41	1928.04	0.00
9000.00	85.00	333.13	7315.33	1808.74	-916.44	2027.66	0.00
9100.00	85.00	333.13	7324.04	1897.61	-961.46	2127.28	0.00
9200.00	85.00	333.13	7332.76	1986.47	-1006.49	2226.90	0.00
9300.00	85.00	333.13	7341.47	2075.33	-1051.51	2326.52	0.00
9400.00	85.00	333.13	7350.19	2164.20	-1096.54	2426.14	0.00
9500.00	85.00	333.13	7358.91	2253.06	-1141.56	2525.76	0.00
9600.00	85.00	333.13	7367.62	2341.93	-1186.59	2625.38	0.00
9700.00	85.00	333.13	7376.34	2430.79	-1231.61	2725.00	0.00
9800.00	85.00	333.13	7385.05	2519.65	-1276.63	2824.61	0.00
9900.00	85.00	333.13	7393.77	2608.52	-1321.66	2924.23	0.00
10000.00	85.00	333.13	7402.48	2697.38	-1366.68	3023.85	0.00
10100.00	85.00	333.13	7411.20	2786.25	-1411.71	3123.47	0.00
10200.00	85.00	333.13	7419.91	2875.11	-1456.73	3223.09	0.00
10275.00	85.00	333.13	7426.45	2941.76	-1490.50	3297.81	0.00
<b>10295.65</b>	<b>85.00</b>	<b>333.13</b>	<b>7428.25</b>	<b>2960.11</b>	<b>-1499.80</b>	<b>3318.38</b>	<b>0.00</b>

MINIMUM CURVATURE CALCULATION METHOD  
HORIZONTAL DISPLACEMENT A BOTTOM OF THE HOLE IS  
**3,318.38 FEET ALONG N 26.87 W**  
RELATIVE TO THE WELLHEAD

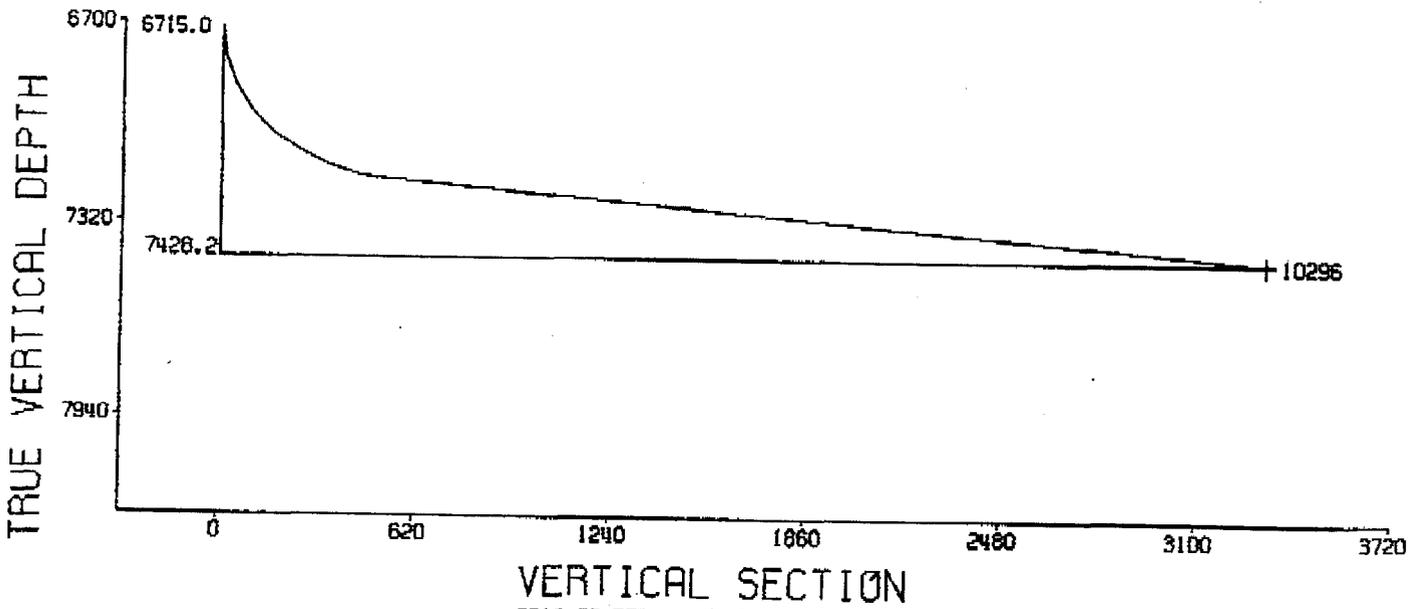
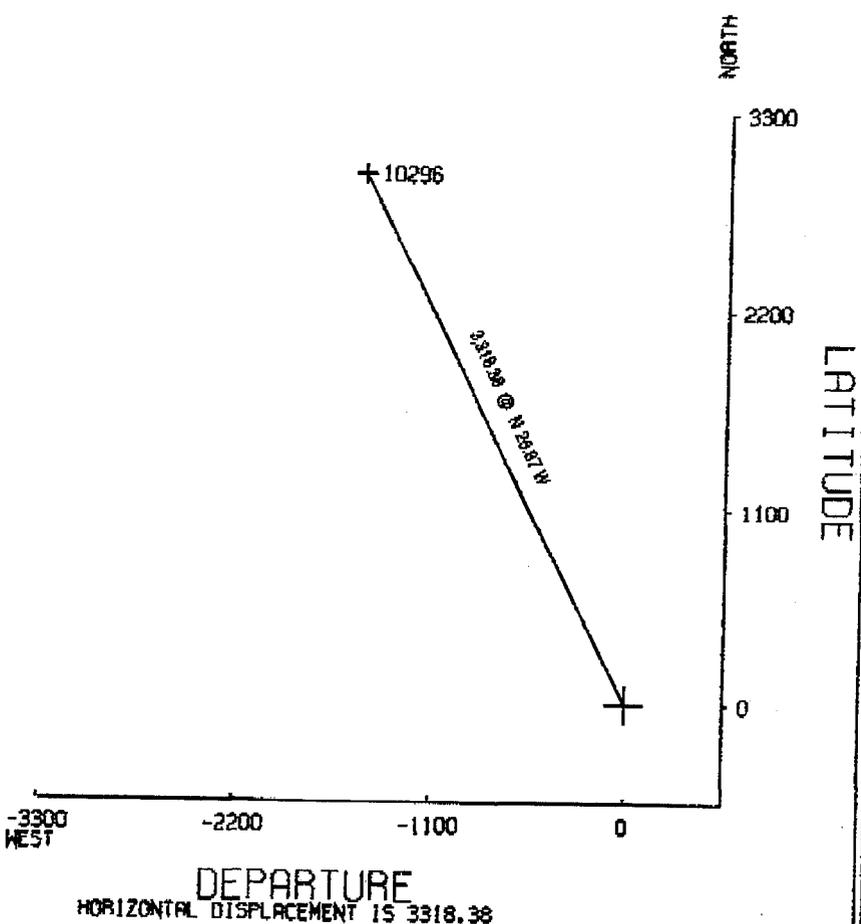
VERTICAL SECTION IS RELATIVE TO WELLHEAD  
**VERTICAL SECTION COMPUTED ALONG 333.13 DEGREES**

# SPERRY-SUN DRILLING SERVICES

## VERTICAL/HORIZONTAL PROJECTION

COASTAL OIL AND GAS  
KANE SPRINGS #16-1  
06/30/93  
UTAH

START TVD = 6715.00  
FINISH TVD = 7428.25  
VERT SECT SCALE IS 620 FEET/IN  
HORT SECT SCALE IS 1100 FEET/IN



WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

DATE RECEIVED: 06/30/93

OPERATOR: COASTAL OIL AND GAS CORP  
WELL NAME: KANE SPRINGS 16-1

OPERATOR ACCT NO: N- 0030

API NO. ASSIGNED: 43 - 019 - 31341

LEASE TYPE: STA LEASE NO: ML-44333  
LOCATION: SESW 16 - T25S - R18E GRAND COUNTY  
FIELD: WILDCAT (001) FIELD CODE: 001

RECEIVED AND/OR REVIEWED:

Plat  
 Bond  
(Number statewide)  
 Potash (Y/N)  
 Oil shale (Y/N)  
 Water permit  
(Number 01-1080 A65409)  
 RDCC Review (Y/N)  
(Date: 7-0-93)

LOCATION AND SITING:

R649-2-3. Unit: Kane Springs  
 R649-3-2. General.  
 R649-3-3. Exception.  
 Drilling Unit.  
Board Cause no: \_\_\_\_\_  
Date: \_\_\_\_\_

COMMENTS:

Included in POD approved 7-23-93.  
Designation of agent for Kane Springs Unit

STIPULATIONS:

cc: Grass assessor  
state lands

CONFIDENTIAL  
PERIOD  
EXPIRES  
ON 12-1-94

1. Pit will be netted after rig moves until fluid being retained is gone.
2. Pit will be lined w/12 mil or greater thickness liner.

COASTAL OIL & GAS  
600 17TH STREET  
DENVER, COLORADO 80201

DATE: 7/1/93

**FACSIMILE TRANSMITTAL PAGE**

THIS TRANSMISSION CONSISTS OF 5 PAGES (INCLUDING COVER)

TO: Mr. Frank Matthews

COMPANY/FIRM State of Utah

CITY/STATE: Salt Lake City, UT

FAX #: (801) 359-3940 CONFIRMATION #: \_\_\_\_\_

FROM: Tom Young & Eileen Dey

TELEPHONE #: (303) 573-4459 / 4476 FROM FAX #: (303) 573-4417

INSTRUCTIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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June 30, 1993

State of Utah  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
355 W. North Temple  
Salt Lake City, Utah 84180-1203

Attention: Mr. Frank Matthews

Re: Coastal Oil & Gas Corporation's  
Application for Permit to Drill  
Kane Springs Unit #16-1  
Grand County, Utah

Gentlemen:

Pursuant to your request to Eileen Dey, please find the enclosed horizontal "plan" for inclusion with the "Application for Permit to Drill" the above referenced well.

Sincerely,

Tom C. Young  
Technical Manager

TCY:tmr

Enclosure

xc: R. Bartley/N. Shiflett/R. Cox/Well File  
E. Dey  
M. McAllister

**Coastal Oil & Gas Corporation**

A SUBSIDIARY OF THE COASTAL CORPORATION  
600 17TH STREET STE. 800 S • P O BOX 749 • DENVER CO 80201-0749 • 303/572-1121

**SPERRY-SUN DRILLING SERVICES**  
Western Region

**COASTAL OIL & GAS CORPORATION**

**Kane Springs #16-1**

**WELL PROPOSAL DATA**

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
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6900.00	24.98	333.13	6894.20	35.40	-17.94	39.69	13.50
6958.07	32.82	333.13	6945.00	60.41	-30.61	Top C-20	
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8200.00	85.00	333.13	7245.60	1097.83	-556.24	1230.70	0.00
8300.00	85.00	333.13	7254.32	1186.69	-601.26	1330.32	0.00
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8500.00	85.00	333.13	7271.75	1364.42	-691.31	1529.56	0.00

**Grand County, Utah**

**SPERRY-SUN DRILLING SERVICES**  
*Western Region*

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9900.00	85.00	333.13	7393.77	2608.52	-1321.66	2924.23	0.00
10000.00	85.00	333.13	7402.48	2697.38	-1366.68	3023.85	0.00
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10200.00	85.00	333.13	7419.91	2875.11	-1456.73	3223.09	0.00
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<b>10295.65</b>	<b>85.00</b>	<b>333.13</b>	<b>7428.25</b>	<b>2960.11</b>	<b>-1499.80</b>	<b>3318.38</b>	<b>0.00</b>
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MINIMUM CURVATURE CALCULATION METHOD  
HORIZONTAL DISPLACEMENT A BOTTOM OF THE HOLE IS  
**3,318.38 FEET ALONG N 26.87 W**  
RELATIVE TO THE WELLHEAD

VERTICAL SECTION IS RELATIVE TO WELLHEAD  
**VERTICAL SECTION COMPUTED ALONG 333.13 DEGREES**

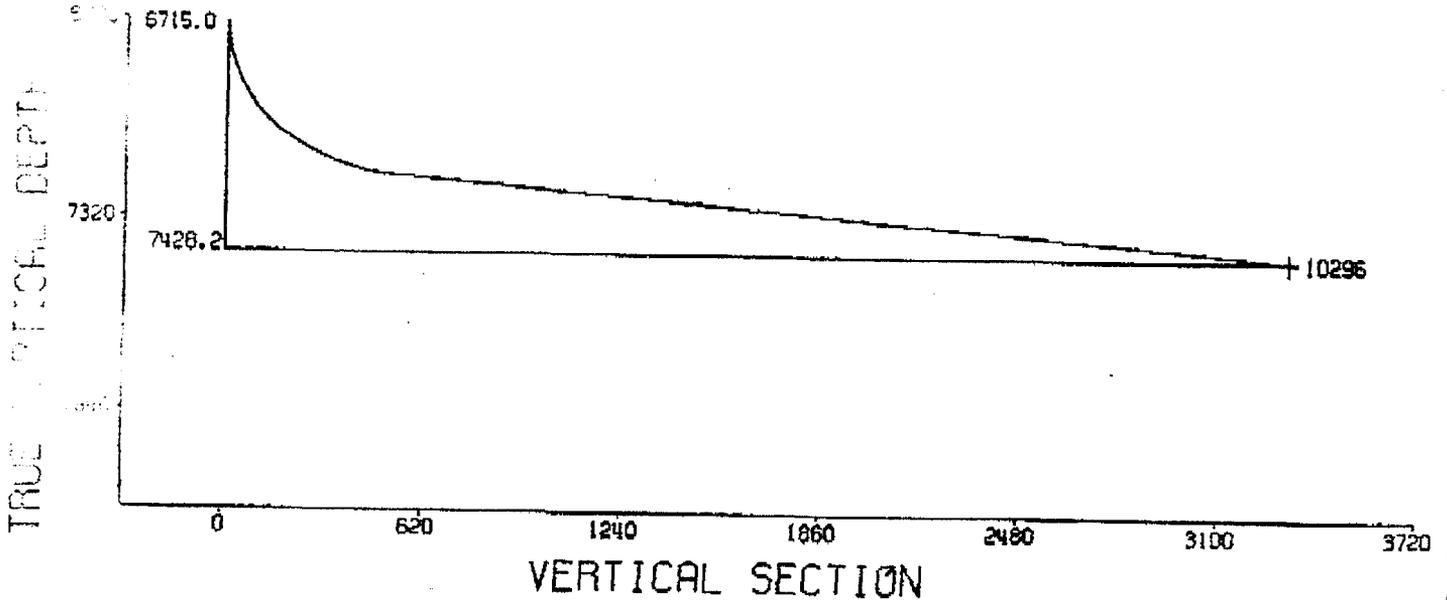
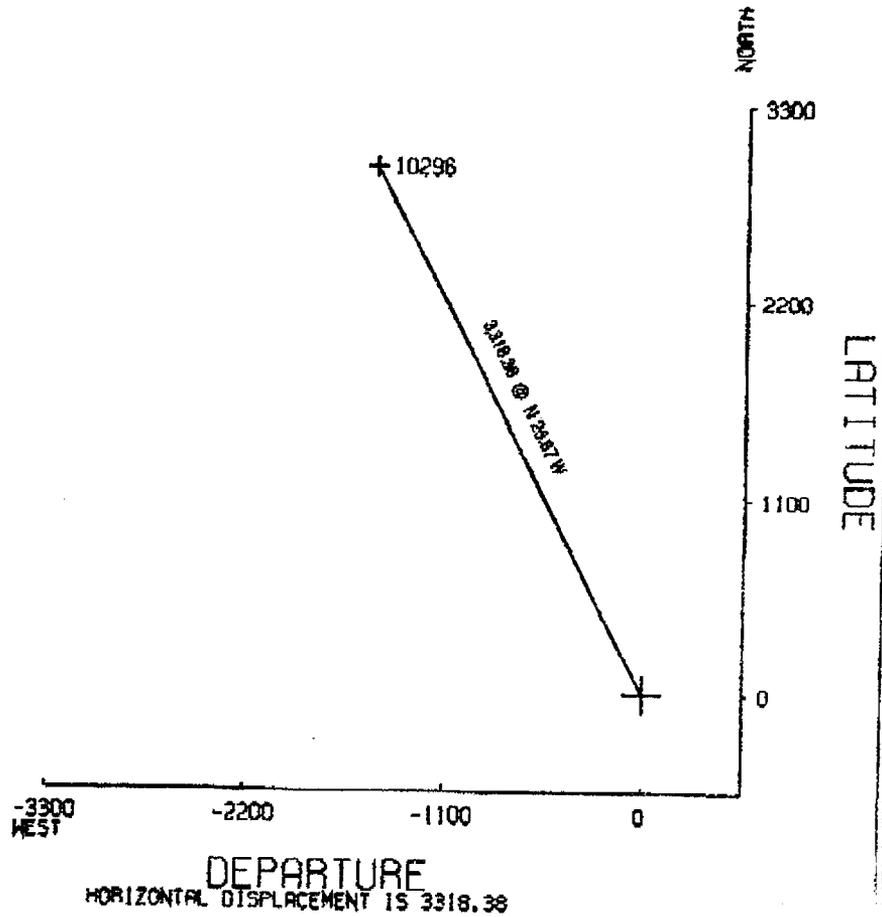
*Grand County, Utah*

# SPERRY-SUN DRILLING SERVICES

## VERTICAL/HORIZONTAL PROJECTION

COASTAL OIL AND GAS  
KANE SPRINGS #16-1  
06/30/93  
UTAH

START TVD = 6715.00  
FINISH TVD = 7428.25  
VERT SECT SCALE IS 620 FEET/IN  
HORT SECT SCALE IS 1100 FEET/IN



9-03 3.11

VERTICAL SECTION  
3318.38 FEET AT N 26 DEG 52 MIN W

COSPRO

COASTAL OIL & GAS  
600 17TH STREET  
DENVER, COLORADO 80201

DATE: 7/1/93

**FACSIMILE TRANSMITTAL PAGE**

THIS TRANSMISSION CONSISTS OF 5 PAGES (INCLUDING COVER)

TO: Mr. Frank Matthews

COMPANY/FIRM State of Utah

CITY/STATE: Salt Lake City, UT

FAX #: (801) 359-3940 CONFIRMATION #: \_\_\_\_\_

FROM: Tom Young & Eileen Dey

TELEPHONE #: (303) 573-4459 / 4476 FROM FAX #: (303) 573-4417

INSTRUCTIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**If you have any trouble receiving the above specified pages, please call sender.**



June 30, 1993

State of Utah  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
355 W. North Temple  
Salt Lake City, Utah 84180-1203

Attention: Mr. Frank Matthews

Re: Coastal Oil & Gas Corporation's  
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Grand County, Utah

Gentlemen:

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Sincerely,

Tom C. Young  
Technical Manager

TCY:tmr

Enclosure

xc: R. Bartley/N. Shiflett/R. Cox/Well File  
E. Dey  
M. McAllister

**Coastal Oil & Gas Corporation**

A SUBSIDIARY OF THE COASTAL CORPORATION  
600 17TH STREET STE. 800 S • P O BOX 749 • DENVER CO 80201-0749 • 303/572-1121

**SPERRY-SUN DRILLING SERVICES**  
Western Region

**COASTAL OIL & GAS CORPORATION**

**Kane Springs #16-1**

**WELL PROPOSAL DATA**

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7100.00	51.98	333.13	7049.33	145.38	-73.66	162.97	13.50

**Start Tangent Section**

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7200.00	65.00	333.13	7101.14	221.44	-112.20	248.24	0.00
7291.96	65.00	333.13	7140.00	295.78	-149.86	331.58	0.00

**Build Angle to 85 Degrees @ 12.87/100' Build Rate**

7300.00	66.04	333.13	7143.33	302.31	-153.17	338.90	12.87
7400.00	78.91	333.13	7173.38	387.19	-196.18	434.06	12.88

**Intersect Target TVD**

7447.30	85.00	333.13	7180.00	428.95	-217.33	480.86	12.88
---------	-------	--------	---------	--------	---------	--------	-------

**Hold Angle at 85 Degrees to Total Depth**

7500.00	85.00	333.13	7184.59	475.78	-241.06	533.37	0.00
7600.00	85.00	333.13	7193.31	564.65	-286.09	632.99	0.00
7700.00	85.00	333.13	7202.03	653.51	-331.11	732.61	0.00
7800.00	85.00	333.13	7210.74	742.37	-376.14	832.23	0.00
7900.00	85.00	333.13	7219.46	831.24	-421.16	931.84	0.00
8000.00	85.00	333.13	7228.17	920.10	-466.19	1031.46	0.00
8100.00	85.00	333.13	7236.89	1008.97	-511.21	1131.08	0.00
8200.00	85.00	333.13	7245.60	1097.83	-556.24	1230.70	0.00
8300.00	85.00	333.13	7254.32	1186.69	-601.26	1330.32	0.00
8400.00	85.00	333.13	7263.03	1275.56	-646.29	1429.94	0.00
8500.00	85.00	333.13	7271.75	1364.42	-691.31	1529.56	0.00

*Grand County, Utah*

**SPERRY-SUN DRILLING SERVICES**  
Western Region

MEASURED DEPTH	ANGLE DEGREE	DIRECTION DEGREE	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG SEVERITY
8600.00	85.00	333.13	7280.47	1453.29	-736.34	1629.18	0.00
8700.00	85.00	333.13	7289.18	1542.15	-781.36	1728.80	0.00
8800.00	85.00	333.13	7297.90	1631.01	-826.39	1828.42	0.00
8900.00	85.00	333.13	7306.61	1719.88	-871.41	1928.04	0.00
9000.00	85.00	333.13	7315.33	1808.74	-916.44	2027.66	0.00
9100.00	85.00	333.13	7324.04	1897.61	-961.46	2127.28	0.00
9200.00	85.00	333.13	7332.76	1986.47	-1006.49	2226.90	0.00
9300.00	85.00	333.13	7341.47	2075.33	-1051.51	2326.52	0.00
9400.00	85.00	333.13	7350.19	2164.20	-1096.54	2426.14	0.00
9500.00	85.00	333.13	7358.91	2253.06	-1141.56	2525.76	0.00
9600.00	85.00	333.13	7367.62	2341.93	-1186.59	2625.38	0.00
9700.00	85.00	333.13	7376.34	2430.79	-1231.61	2725.00	0.00
9800.00	85.00	333.13	7385.05	2519.65	-1276.63	2824.61	0.00
9900.00	85.00	333.13	7393.77	2608.52	-1321.66	2924.23	0.00
10000.00	85.00	333.13	7402.48	2697.38	-1366.68	3023.85	0.00
10100.00	85.00	333.13	7411.20	2786.25	-1411.71	3123.47	0.00
10200.00	85.00	333.13	7419.91	2875.11	-1456.73	3223.09	0.00
10275.00	85.00	333.13	7426.45	2941.76	-1490.50	3297.81	0.00
<b>10295.65</b>	<b>85.00</b>	<b>333.13</b>	<b>7428.25</b>	<b>2960.11</b>	<b>-1499.80</b>	<b>3318.38</b>	<b>0.00</b>

MINIMUM CURVATURE CALCULATION METHOD  
HORIZONTAL DISPLACEMENT A BOTTOM OF THE HOLE IS  
**3,318.38 FEET ALONG N 26.87 W**  
RELATIVE TO THE WELLHEAD

VERTICAL SECTION IS RELATIVE TO WELLHEAD  
**VERTICAL SECTION COMPUTED ALONG 333.13 DEGREES**

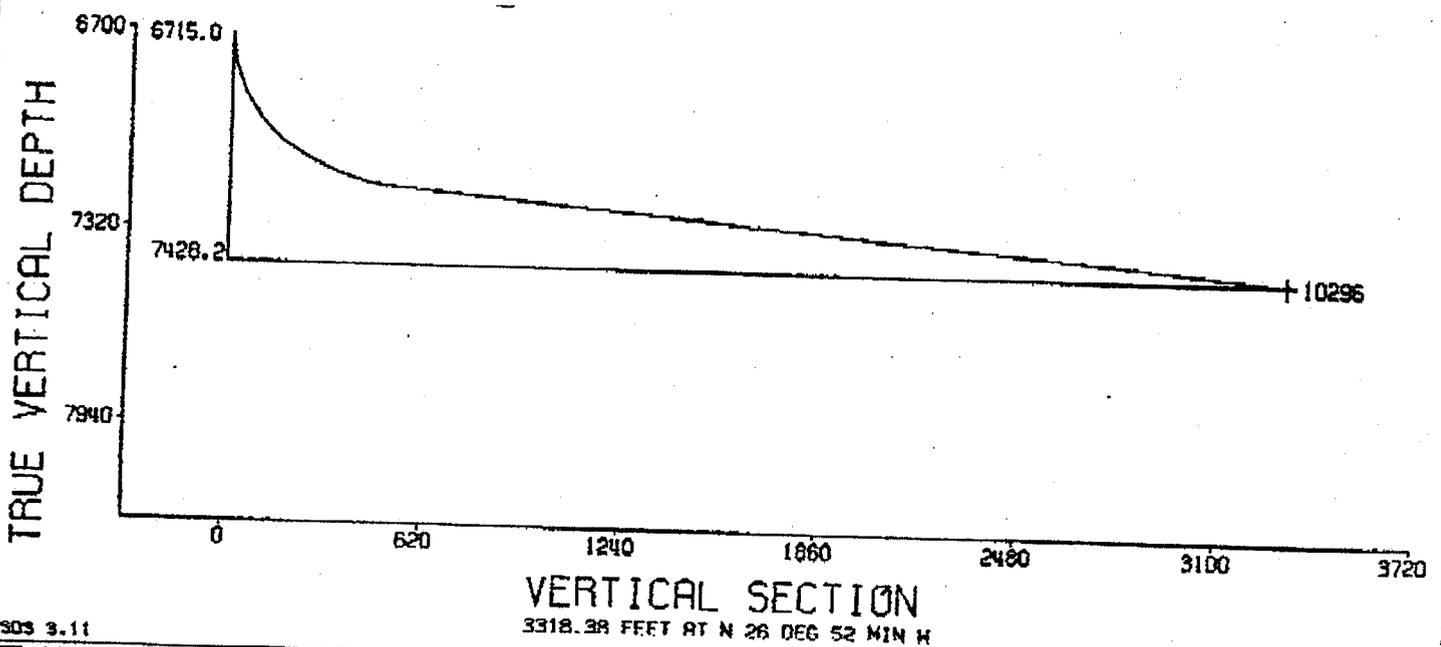
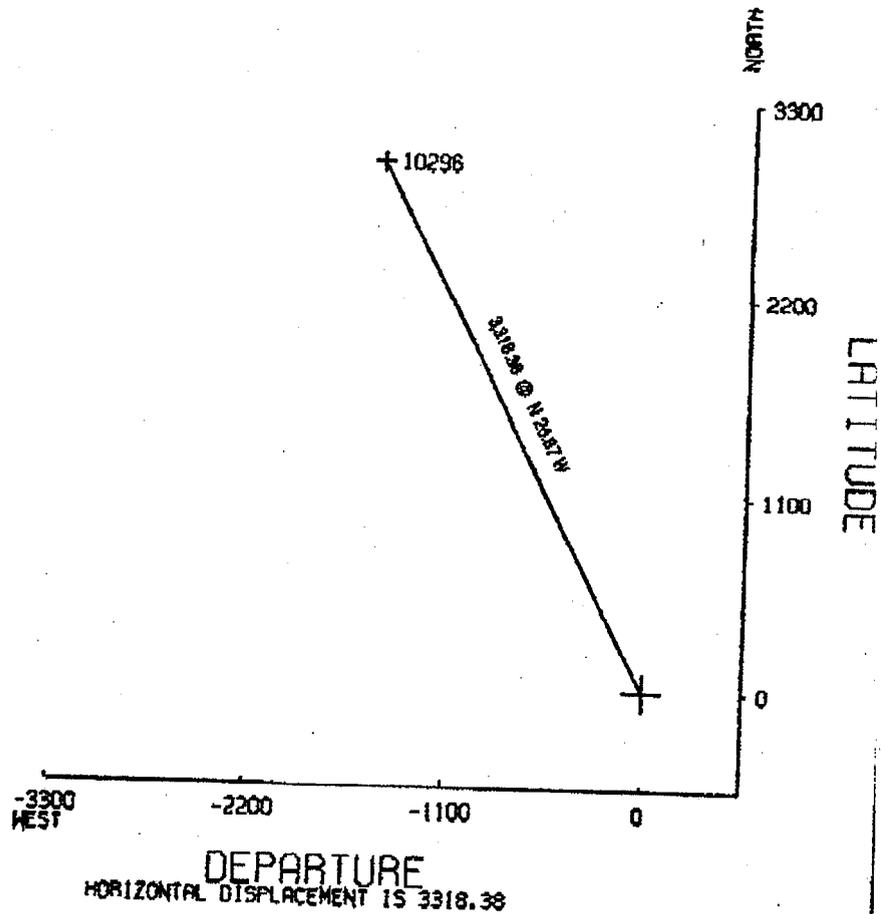
Grand County, Utah

# SPERR-SUN DRILLING SERVICES

## VERTICAL/HORIZONTAL PROJECTION

COASTAL OIL AND GAS  
KANE SPRINGS #16-1  
06/30/93  
UTAH

START TVD = 6715.00  
FINISH TVD = 7428.25  
VERT SECT SCALE IS 620 FEET/IN  
HORT SECT SCALE IS 1100 FEET/IN



SSOS 3.11

COSPRO

COASTAL OIL & GAS  
600 17TH STREET  
DENVER, COLORADO 80201

DATE: 7/1/93

**FACSIMILE TRANSMITTAL PAGE**

THIS TRANSMISSION CONSISTS OF 5 PAGES (INCLUDING COVER)

TO: Mr. Gil Hunt

COMPANY/FIRM State of Utah

CITY/STATE: Salt Lake City, UT

FAX #: (801) 359-3940 CONFIRMATION #: \_\_\_\_\_

FROM: \_\_\_\_\_ Eileen Dey

TELEPHONE #: (303) 573-4476 FROM FAX #: (303) 573-4417

INSTRUCTIONS: \_\_\_\_\_

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**If you have any trouble receiving the above specified pages, please call sender.**

Cultural Resources Inventory for Coastal  
Oil & Gas Corporation's Kane Springs Unit 16-1 Well Pad and  
Access Road  
Grand County, Utah

by  
John M. Scott  
Staff Archaeologist

Michael D. Metcalf  
Principal Investigator

for  
Coastal Oil and Gas Corporation  
Nine Greenway Plaza, Suite 474  
Houston, TX 77046

Prepared by  
Metcalf Archaeological Consultants, Inc.  
P. O. Box 899  
Eagle, CO 81631

Project Number U-93-MM-284a

June, 1993

Post-It™ brand fax transmittal memo 7871		# of pages >	4
To	Eileen Day	From	Sally Metcalf
Co.	Coastal	Co.	MAC
Dept.		Phone #	303-328-6244
Fax #	801-259-2301	Fax #	

## Introduction

Metcalfe Archaeological Consultants, Inc. (MAC) contracted by a representative of Coastal Oil & Gas Corporation conducted a cultural resource investigation of the Kane Springs Unit 16-1 well pad project. The well pad and an associated access road is to be constructed in the NW/SE/SW of section 16, T25N, R13E, Grand County, Utah and is on land administered by the State of Utah. Access for the location will start from an existing road in the SW/SE/NE/SW of the same section as the well pad. It will run south for 100' before becoming part of the 10 acre block surveyed for the 16-1 well pad (Figure 1). Total acreage surveyed for this project amounted to 10.33 acres. This cultural resource inventory was conducted by MAC archaeologist John M. Scott on June 26, 1993 under Utah State permit number U-93-NM (expires 2/8/94). All field notes and maps are located in the MAC office in Eagle, Colorado.

## Files Search

A file search was requested through the Division of State History in Salt Lake City on June 25, 1993. This search revealed surveys and previously recorded sites in the general area of the project. A large project (Proposed Knoll Detail Prospect) was conducted by the Grand River Institute, for Western Geophysical in June of 1991. This project recorded 15 new sites and 35 isolates on 2,250 acres. The northeast edge of this project is located approximately one kilometer to the west of the present project area. No sites were recorded along that project's edge nearest to the proposed Kane Spring Unit 16-1 well pad. No isolates or sites recorded during the Proposed Knoll Detail Prospect Block Survey or any other project will be directly impacted by the current study area.

## Environment

The general physiography of the study location is between the Green River on the west and the Colorado River on the east. It is much closer to the Green River than to the Colorado River. The project area appears to be in the Green River Desert along the desert's west edge and north of the Lisbon Frong Salt Anticline (Stokes 1986). More specifically it is located on shrub covered flats of Deadman Point between Spring Canyon to the west and Dubinky Wash and Hell Roaring Canyon along the east and south. Sandstone buttes can be seen to the south, north and northwest. Sandstone benches and low bluffs can be seen to the southeast and north. The soil is a reddish silt loam with a hard crust and very few gravels. The pad and access are located between two existing roads. One road is along the project area's north and the other bisects northeast to southwest along the east half of the well pad. The two roads join each other along the northeast corner of the 10 acre project area. Another road (two track) cuts due south along

the south center of the surveyed block. It appears that this road may have crossed all the way through the proposed pad's location but now only the southern portion is used and the northern part is over grown and almost indistinguishable. The area slopes to the northwest draining the area (eventually) into the Green River. The access starts along the south side of the existing road that is along the north of the project area. It heads almost due south for approximately one hundred feet before connecting with the 10 acre block surveyed for the associated well pad. This access is in the same environment as the well pad's.

Vegetation cover for the proposed well pad and its access is about 40 percent and ground visibility is between fair and good. This ground cover is an Upper Sonoran semi-desert shrub community. On the proposed well location and its access the vegetation consists of longleaf ephedra, sagebrush, rabbitbrush, shadscale, grasses and mixed forbs.

#### Field Methodology

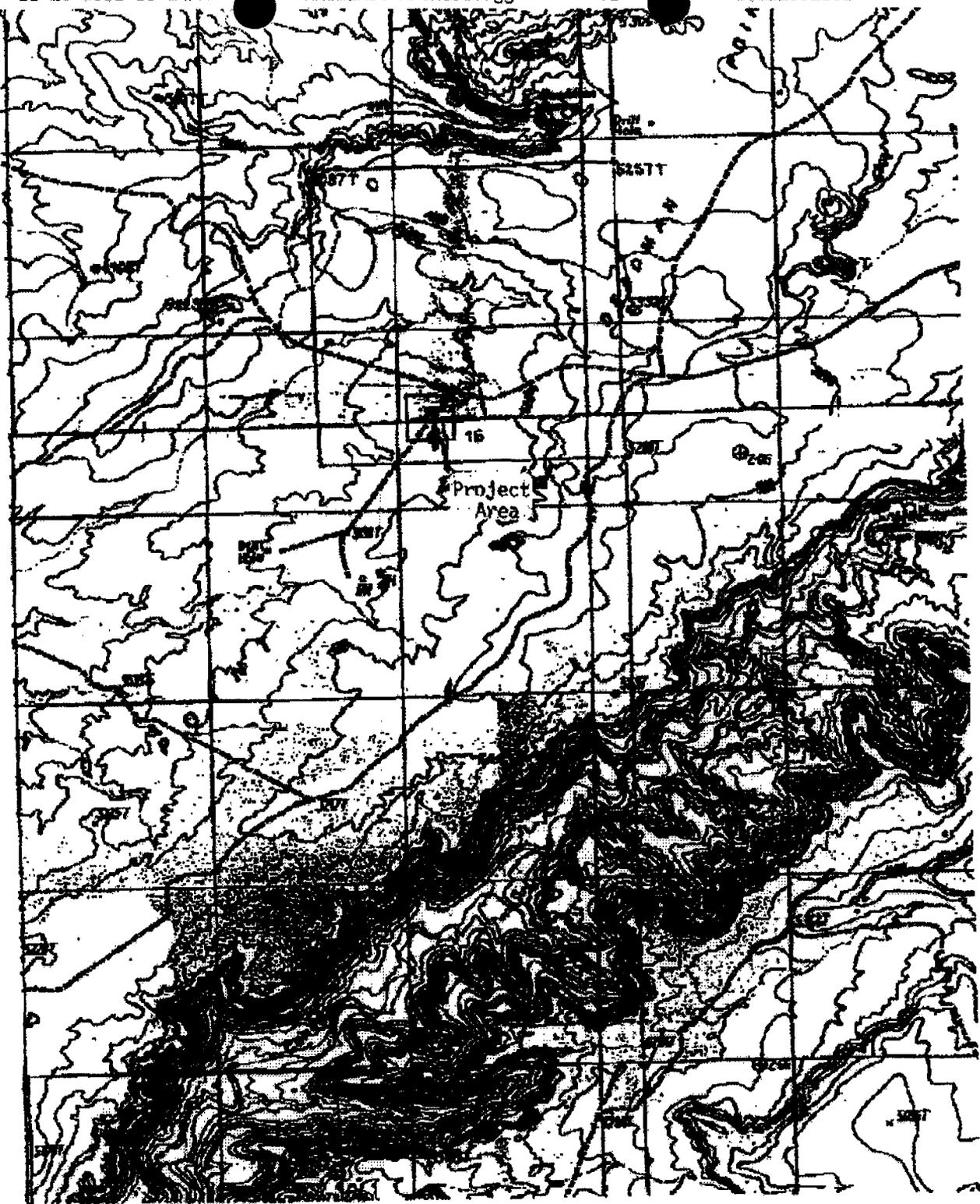
The well pad was inspected for cultural properties by marking with pin flags a block of ten acres centered around the proposed drill hole location. This area was then examined using parallel pedestrian transects spaced no more than fifteen meters apart. The proposed access was inspected using a single zigzag transect cycling back and forth across the flagged center line. This transect extended no further than fifty feet from either side of the center line providing a surveyed hundred foot wide corridor.

#### Results

No historical or prehistorical cultural properties were located during this study. Modern evidence of a possible sheep herders camp was located along the northeast corner of the 10 acre block where the two dirt roads meet. The modern remains included a milled wood board with a log cabin syrup can nailed to it. The nails are modern. Also obviously modern and located in the same area are drink cans with aluminum tops and pull tab openings. Two to three unmodified sandstone blocks are present. All of these materials are located in a 20 meter by 20 meter area and associate with each other. None of the cultural remains are historical and all are non-significant.

#### Recommendations

Cultural clearance is recommended for the Kane Springs Unit 16-1 as it is presently staked.



DUBINKY WASH AND MINERAL CANYON QUADRANGLES See 16 T255 R18E

TOTAL P.04

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

5. Lease Designation and Serial Number:

ML-44333

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Kane Springs Federal Unit

8. Well Name and Number:

Kane Springs Unit #16-1

9. API Well Number:

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:

Coastal Oil & Gas Corporation

3. Address and Telephone Number:

P. O. Box 749 Denver, CO 80201-0749 (303) 573-4476

10. Field and Pool, or Wildcat:

Wildcat

4. Location of Well

Footages: 960' FSL & 1960' FWL (surface hole)

County: Grand

QQ, Sec., T., R., M.: SE/SW Section 16, T25S-R18E

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

**NOTICE OF INTENT**  
(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other Notification of Permitted Water Source

- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other \_\_\_\_\_

- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion \_\_\_\_\_

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

\* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Coastal Oil & Gas Corporation will obtain water for the drilling of the above referenced well from La Sal Oil Company, Inc., under Moab City Water Right #05-906.

If additional water is needed, it will be obtained from Aable Trucking Company, Water Right #01-1082, Application #A 65409. (See the attached documentation.)

13.

Name & Signature:

*Eileen Danni Dey*  
Eileen Danni Dey

Title: Regulatory Analyst

Date: 7/1/93

(This space for State use only)

**RECEIVED**

JUL 02 1993

DIVISION OF  
OIL GAS & MINING



State of Utah  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
 Governor  
 Ted Stewart  
 Executive Director  
 James W. Carter  
 Division Director

355 West North Temple  
 3 Triad Center, Suite 350  
 Salt Lake City, Utah 84180-1203  
 801-538-5340  
 801-359-3940 (Fax)  
 801-538-5319 (TDD)

UTAH DIVISION OF OIL, GAS AND MINING  
 FACSIMILE TRANSMISSION COVER SHEET

DATE:

7-19-93

FAX #

303-573-4417

ATTN:

Rodney Cook

COMPANY:

Coastal Oil

FROM:

Frank Matthews

DEPARTMENT:

DOG M

NUMBER OF PAGES BEING SENT (INCLUDING THIS ONE):

1

If you do not receive all of the pages, or if they are illegible, please call (801) 538-5340.

We are sending from a Murata facsimile Machine. Our telecopier number is (801) 359-3940.

MESSAGES:

Permission to start dirtwork given  
 by Frank Matthews 7/19/93 Frank Matthews



**State of Utah**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

July 26, 1993

Coastal Oil & Gas Corporation  
P.O. Box 749  
Denver, Colorado 80201-0749

Gentlemen:

Re: Kane Springs Unit 16-1 Well, 960' FSL, 1960' FWL, SE SW, Sec. 16, T. 25 S., R. 18 E., Grand County, Utah

Pursuant to Utah Code Ann. § 40-6-18, (1953, as amended), Utah Admin. R. 649-2-3, Application of Rules to Unit Agreements and R. 649-3-4, Permitting of Wells to be Drilled, Deepened or Plugged-Back, approval to drill the referenced well is hereby granted.

In addition, the following specific actions are necessary to fully comply with this approval:

1. The reserve pit shall be completely fenced after drilling is completed and be flagged overhead and covered with wire mesh until leveling and cleaning operations commence.
2. The reserve pit shall be lined. A synthetic liner with a minimum of 12 mil thickness is required.
3. Compliance with the requirements of Utah Admin. R. 649-1 et seq., Oil and Gas Conservation General Rules.
4. Notification within 24 hours after commencing drilling operations.
3. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.
4. Submittal of the Report of Water Encountered During Drilling, Form 7.



Page 2  
Coastal Oil & Gas Corporation  
Kane Springs Unit 16-1 Well  
July 26, 1993

5. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or R.J. Firth, Associate Director, (Home) (801)571-6068.
6. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.

Trash and sanitary waste should be properly contained and transported to approved disposal locations, not retained in or disposed of in pits on location or downhole. Prior to the commencement of drilling operations, the operator should consult the local/county sanitarian and/or the Department of Environmental Quality, Division of Drinking Water/Sanitation, regarding appropriate disposal of sanitary waste.

This approval shall expire one year after date of issuance unless substantial and continuous operation is underway or a request for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-019-31341.

Sincerely,



R.J. Firth

Associate Director, Oil and Gas

ldc  
Enclosures  
cc: Bureau of Land Management  
Grand County Assessor  
State Lands and Forestry  
J.L. Thompson

WO11

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: COASTAL OIL/GAS 43-019-31341

WELL NAME: KANE SPRINGS 16-1

Section 16 Township 25S Range 18E County GRAND

Drilling Contractor PARKER DRILLING

Rig # 233

SPUDDED: Date 7/23/93

Time \_\_\_\_\_

How DRY HOLE

Drilling will commence \_\_\_\_\_

Reported by GLENN GOODWIN-DOGM

Telephone # \_\_\_\_\_

Date 8/2/93 SIGNED JLT

STATE ACTIONS

Mail to:  
RDCC Coordinator  
116 State Capitol  
Salt Lake City, Utah 84114

- 
1. ADMINISTERING STATE AGENCY  
OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203
2. STATE APPLICATION IDENTIFIER NUMBER:  
(assigned by State Clearinghouse)
- 
3. APPROXIMATE DATE PROJECT WILL START:  
Upon approval
- 
4. AREAWIDE CLEARING HOUSE(S) RECEIVING STATE ACTIONS:  
(to be sent out by agency in block 1)  
Southeastern Utah Association of Governments
- 
5. TYPE OF ACTION:  Lease  Permit  License  Land Acquisition  
 Land Sale  Land Exchange  Other \_\_\_\_\_
- 
6. TITLE OF PROPOSED ACTION:  
Application for Permit to Drill
- 
7. DESCRIPTION:  
Coastal Oil & Gas Corporation proposes to drill the Kane Springs Unit 16-1 well (wildcat) on state lease ML-44333, Grand County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.
- 
8. LAND AFFECTED (site location map required) (indicate county)  
SE/4, SW/4, Section 16, Township 25 South, Range 18 East, Grand County, Utah
- 
9. HAS THE LOCAL GOVERNMENT(S) BEEN CONTACTED?
- 
10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:  
Degree of impact is based on the discovery of oil or gas in commercial quantities.
- 
11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:
- 
12. FOR FURTHER INFORMATION, CONTACT: 13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL:  
Frank R. Matthews  
PHONE: 538-5340
- FR Matthews*  
Petroleum Engineer
- DATE: 7-6-93

COASTAL OIL & GAS  
600 17TH STREET  
DENVER, COLORADO 80201

DATE: 7-26-93

**FACSIMILE TRANSMITTAL PAGE**

THIS TRANSMISSION CONSISTS OF 3 PAGES (INCLUDING COVER)

TO: Frank Matthews

COMPANY/FIRM UT Div of O&M

CITY/STATE: \_\_\_\_\_

FAX #: 801/359-3940 CONFIRMATION #: \_\_\_\_\_

FROM: E. -en Day

TELEPHONE #: 303/573-4476 FROM FAX #: X 4477

INSTRUCTIONS: \_\_\_\_\_

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Post-It™ brand fax transmittal memo 7671

APPROVED - EFFECTIVE JUL 16 1993

To: <u>Don Spicer</u>	From: <u>C. G. STORARD</u>
Co: <u>COLUMBIA</u>	Co: <u>BLM</u>
Dept.	Phone # <u>539-4442</u>
Fax # <u>303-573-4420</u>	Fax # <u>212 539-4200</u>

CHIEF, BRANCH OF FLUID MINERALS  
BUREAU OF LAND MANAGEMENT

DESIGNATION OF AGENT

The undersigned is, on the records of the Bureau of Land Management, unit operator under the Kane Springs Unit Agreement, Grand County, Utah, No. UT67755X approved and effective on December 27, 1990

and hereby designates:

Name: Coastal Oil & Gas Corporation  
Address: P. O. Box 749  
Denver, CO 80201-0749

as its agent, with full authority to act on its behalf in complying with the terms of the unit agreement and regulations applicable thereto and on whom the authorized officer or his representative may serve written or oral instructions in securing compliance with the oil and gas operating regulations with respect to drilling, testing, and completing unit well No. 16-1 in the SE 1/4 SW 1/4, sec. 16, T. 25 S, R. 18 E, Grand County, Utah. Bond coverage will be provided under (Statewide, Nationwide, Lessee) Bond No. C00018.

It is understood that this designation of agent does not relieve the unit operator of responsibility for compliance with the terms of the unit agreement and the oil and gas operating regulations. It is also understood that this designation of agent does not constitute an assignment of any interest under the unit agreement or any lease committed thereto.

In case of default on the part of the designated agent, the unit operator will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his duly authorized representative.

The unit operator agrees promptly to notify the authorized officer of any change in the designated agent.

This designation of agent is deemed to be temporary and in no manner a permanent arrangement, and a designated agent may not designate another party as agent.

This designation is given only to enable the agent herein designated to drill the above specified well. It is understood that this designation of agent is limited to the field operations performed while drilling and completing the specified well and does not include administrative actions requiring specific authorization of the unit operator. This designation in no way will serve as authorization for the agent to conduct field operations for the specified well after it has been completed for production. Unless sooner terminated, this designation shall terminate when there is filed in the appropriate office of the Bureau of Land Management all reports and a Well Completion Report and Log (Form 3160-4) as required by the approved Application for Permit to Drill for the specified well.

In the event the above specified well is completed as a non-paying unit well, the authority for the designated agent to operate this well shall be established by completion of the Delegation of Authority to Operate Non-paying Unit Well form and submittal of the form to the appropriate office of the authorized officer.

COLUMBIA GAS DEVELOPMENT CORPORATION

7-12-93

Date

Leslie M. Moor  
Unit Operator

By: Leslie M. Moor, Jr., Vice President  
Authorized Officer

Date

BFM

**COLUMBIA GAS**  
Development



July 6, 1993

United States Department of the Interior  
Bureau of Land Management  
Utah State Office  
P. O. Box 45155  
Salt Lake City, UT 84155

APPROVED - EFFECTIVE JUL 23 1993  
*[Signature]*  
CHIEF, BRANCH OF FLUID MINERALS  
BUREAU OF LAND MANAGEMENT

Attn: Mr. Robert Henricks

RE: Supplemental 1993 Plan of Development  
Kane Springs Federal Unit  
Grand and San Juan Counties, Utah

Dear Mr. Henricks:

Columbia Gas Development Corporation hereby submits the following changes to the 1993 Plan of Development for the Kane Springs Federal Unit.

Columbia has drilled and completed the Kane Springs Federal #25-19-34-1 well as a southerly offset to the Kane Springs Federal #27-1 well, which was the original exploratory well drilled in the unit. The #25-19-34-1 well was spudded on March 19, 1993 and reached a total depth of 7988 ft. MD/7377 ft. TVD on May 1, 1993. The well was completed on May 21, 1993, as a horizontal oil well in the Cane Creek zone of the Paradox formation. On May 21, 1993, during a 24-hour test, the well produced 731 bbls. oil, 328 mcf gas and 0 bbls. water through a 30/64" choke with a flowing tubing pressure of 287 psi. The well is currently shut-in pending installation of production facilities.

Columbia is currently drilling the Kane Springs Federal #20-1 well located in the SE/4 SW/4 Section 20, T 26 S, R 19 E. This well is being drilled to define the southwesterly limits of the Cane Creek play. The well is projected to reach a total depth of 9,620 ft. MD/7,430 ft. TVD with a horizontal displacement of 2,000 ft. in the Cane Creek zone. The estimated bottom hole location is 1860 ft. FNL and 1500 ft. FWL, Section 20, T 26 S, R 19 E. The well is currently drilling in the Cane Creek zone.

Columbia or its partners plan to drill one (1) additional well this year. The Kane Springs Unit #16-1 well is located southwest of the Kane Springs Federal #10-1 well at a surface location in the SE/4 SW/4 Section 16, T 25 S, R 18 E. The well is to be drilled to an objective depth of 7,180 ft. TVD/10,200 ft. MD with a bottom hole location in the SW/4 NW/4 Section 16, T 25 S, R 18 E. This provides a horizontal displacement of approximately 2,900 ft. in the Cane Creek zone. The well is currently being permitted by Coastal, as agent for Columbia. There are no contractual obligations on this well.

Very truly yours,

*Michael K. Mendenhall*  
Michael K. Mendenhall, CPL  
Senior Landman

/ps

Columbia Gas Development Corporation, One Riverway, P.O. Box 1350, Houston, Texas 77251-1350  
Telephone: (713) 871-3400. FAX: (713) 871-3883



**State of Utah**  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF WILDLIFE RESOURCES

Michael O. Leavitt  
 Governor  
 Ted Stewart  
 Executive Director  
 Timothy H. Provan  
 Division Director

1596 West North Temple  
 Salt Lake City, Utah 84116-3195  
 801-538-4700  
 801-538-4709 (Fax)

July 29, 1993

cc: Jwe Orig: Frank Matthews

**RECEIVED**

JUL 30 1993

DIVISION OF  
 OIL GAS & MINING

Mr. James W. Carter  
 Division of Oil, Gas and Mining  
 355 West North Temple  
 3 Triad Center, Suite 350  
 Salt Lake City, Utah 84180-1203

Attention: Frank Matthews

**RECEIVED**  
 MAR 19 1994  
 DIV. OF OIL, GAS & MINING

Dear James:

The Division of Wildlife Resources has reviewed the Application for Permit to Drill (APD) by Coastal Oil & Gas Corporation in the Kane Springs Unit 16-1 well. On June 30, 1993, Ken Phippen, Regional Habitat Manager attended an onsite evaluation with personnel from Coastal, DOGM and the Division of State Lands and Forestry. The Division has the following comments and recommendations.

The issues surrounding oil and gas development in the Moab area include impacts to desert bighorn sheep, peregrine falcons, other raptors, contamination of water sources and cumulative impacts. This particular site is located away from canyon rims; therefore, it will have minimal impacts to desert bighorn sheep. We are not aware of any seeps or springs in the vicinity of this site and do not expect contamination of any.

Peregrine falcons and other raptors, such as golden eagles, ferruginous hawks and prairie falcons, likely occur in the area and forage on this site. Potential impacts to these birds include disturbance during nesting periods and contamination in the reserve pits. There are no known nests in the vicinity of this site. The presence of hydrocarbons or other toxic substances in these reserve pits is a risk to these species as well as others. The Division recommends netting these pits with a one-inch mesh size or less. This requirement has been used in several Environmental Assessments and well sites in this area. The Bureau of Land Management has identified this problem and required netting of reserve pits in their EA's for Kane Springs Federal wells 10-1 and 20-1 for Columbia Gas Development Corporation (EA 068-91-082), Coors Energy Company's Federal Well 1-13 (EA UT-068-91-032), as well as others.

Seeding of this area during reclamation should occur in late fall or early spring. The intent should be to insure the seed is in



Mr. James W. Carter  
July 29, 1993  
Page 2

the ground prior to the spring moisture period. Some seeds require a freezing period for proper germination. Several different seed mixes could be utilized. We recommend a mixture that includes pure live seed of the following:

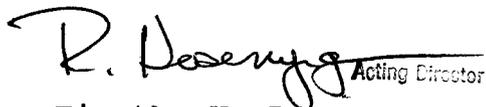
Indian Ricegrass	2 lbs/acre
Sand Dropseed	1 lbs/acre
Needle-and-thread	2 lbs/acre
Galleta	1.5 lbs/acre
Scarlet globemallow	0.5 lbs/acre
Lewis flax	1 lbs/acre
Torrey Mormon Tea	1 lbs/acre
Winterfat	1.5 lbs/acre

If the seed is scattered rather than drilled, the application rates should be doubled.

Another potential seed mix could be the mix used at the Chevron site on Hatch Point (Section 33, T27S, R20E). If your agency has determined that this reclamation was successful, the Chevron seed mix would be appropriate for this new site.

I appreciate the opportunity for Division personnel to be involved in the on-site inspections and to provide comments. If there are any questions or you need additional information, please contact Ken Phippen (637-3310).

Sincerely,

  
Acting Director

Timothy H. Provan  
Director

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

	5. Lease Designation and Serial Number: ML-44333
	6. If Indian, Allottee or Tribe Name: N/A
	7. Unit Agreement Name: Kane Springs Fed. Unit
1. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER:	8. Well Name and Number: Kane Springs Unit #16-1
2. Name of Operator: Coastal Oil & Gas Corporation	9. API Well Number: 43-019-31341
3. Address and Telephone Number: P. O. Box 749 Denver, CO 80201-0749 (303) 573-4476	10. Field and Pool, or Wildcat: Wildcat
4. Location of Well Footages: 960' FSL & 1960' FWL County: Grand QQ, Sec., T., R., M.: SE/SW Section 16, T25S-R18E State: Utah	

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)																										
<table style="width:100%;"> <tr> <td><input type="checkbox"/> Abandonment</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Recompletion</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Multiple Completion</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td></td> </tr> </table>	<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____		<table style="width:100%;"> <tr> <td><input type="checkbox"/> Abandonment *</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input checked="" type="checkbox"/> Other <u>Report of Spud</u></td> <td></td> </tr> </table>	<input type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off	<input checked="" type="checkbox"/> Other <u>Report of Spud</u>	
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<input checked="" type="checkbox"/> Other <u>Report of Spud</u>																											
Approximate date work will start _____	Date of work completion _____ Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.																										

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Spud surface hole on the above referenced well @ 7:00 a.m., 7/24/93. Drilled 30" hole to 67' and set 67' of 20" conductor. Cemented on 7/26/93 w/7 yards of Redi-mix.

**RECEIVED**

AUG 04 1993

DIVISION OF  
OIL GAS & MINING

13. Name & Signature: Eileen Danni Dey Title: Regulatory Analyst Date: 8/2/93

(This space for State use only)

OPERATOR Coastal Oil & Gas Corporation

OPERATOR ACCT. NO. M

ADDRESS P. O. Box 749

Denver, CO 80201-0749

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A			43-019-31341	Kane Springs Unit #16-1	SESW	16	25S	18E	Grand	7/24/93	7/24/93
WELL 1 COMMENTS:											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

- ACTION CODES** (See instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

**RECEIVED**

AUG 04 1993

DIVISION OF  
OIL GAS & MINING

*Eileen Danni Dey*  
Signature Eileen Danni Dey

Regulatory Analyst 8/2/93  
Title Date

Phone No. (303) 573-4476

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

AUG 16 1993

RECEIVED

DIVISION OF OIL, GAS & MINING

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work  
 DRILL  DEEPEN  PLUG BACK

b. Type of Well  
 Oil Well  Gas Well  Other  Single Zone  Multiple Zone

2. Name of Operator  
 Coastal Oil & Gas Corporation

3. Address of Operator  
 P. O. Box 749 Denver, CO 80201-0749 (303) 573-4476

4. Location of Well (Report location clearly and in accordance with any State requirements.)  
 At surface 960' FSL & 1960' FWL  
 At proposed prod. zone 460' FWL & 1360' FNL

14. Distance in miles and direction from nearest town or post office\*  
 Twenty-six (26) miles northwest of Moab, Utah.

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any)  
 Surface 1960' BHL 460'

16. No. of acres in lease 640

17. No. of acres assigned to this well N/A (Federal Unit)

18. Distance from proposed location\* to nearest well, drilling, completed, or applied for, on this lease, ft. ±6100'

19. Proposed depth 7805' TVD/10226' MD

20. Rotary or cable tools Rotary

21. Elevations (Show whether DF, RT, GR, etc.)  
 5143' Ungrd GR

22. Approx. date work will start\* ASAP

5. Lease Designation and Serial No.  
 ML-44333

6. If Indian, Allottee or Tribe Name  
 N/A

7. Unit Agreement Name  
 Kane Springs Fed. Unit

8. Farm or Lease Name  
 Kane Springs Unit

9. Well No.  
 16-1 43-019-31341

10. Field and Pool, or Wildcat  
 Wildcat

11. Qq. Sec., T., R., N., or Blk. and Survey or Area  
 SE/SW Section 16, T25S-R18E

12. County or Parrish Grand

13. State Utah

PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
--------------	----------------	-----------------	---------------	--------------------

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed: Eileen Danni Dey Title: Regulatory Analyst Date: 6/25/93

(This space for Federal or State office use)

API NO. \_\_\_\_\_ Approval Date: \_\_\_\_\_

Approved by: [Signature] Title: Branch of Fluid Minerals Date: AUG 11 1993

Conditions of approval, if any: \_\_\_\_\_

ACCEPT for unit purposes only: 20j 7/2/93

\*See Instructions On Reverse Side

Daan

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
CEMENTING OPERATIONS

COMPANY NAME: COASTAL OIL/GAS API NO: 43-019-31341

WELL NAME: KANE SPRINGS 16-1

QTR/QTR SE/SW SECTION 16 TOWNSHIP 25S RANGE 18E

CEMENTING COMPANY: HOWCO WELL SIGN: Y

INSPECTOR: GLENN GOODWIN DATE: 8/17/93

CEMENTING OPERATIONS: PLUGBACK:        SQUEEZE:        P&A ZONE:       

SURFACE CASING: Y INTERMEDIATE:        PROD CASING:       

PERFORATIONS:        SQUEEZE PRESSURE:       

CASING INFORMATION:

SIZE: 13 3/8" GRADE: 54.5 # HOLE SIZE: 17.5 DEPTH: 825'

SLURRY INFORMATION:

1. CLASS: HOWCOLITE TROPIC 380 SXS TYPE 5  
LEAD : 450 SXS TAIL:       

2. SLURRY WEIGHT LBS. PER GALLON:  
LEAD: 13.6# 450 SXS TAIL: 380 SXS 15.6 #

3. WATER (GAL/SX)  
LEAD:        TAIL:       

4. COMPRESSIVE STRENGTH:  
PSI @        HRS.        HRS

PIPE CENTRALIZED: Y CEMENTING STAGES: N

LOST RETURNS: N REGAIN RETURNS:        BARRELS LOST:       

TOP OF CEMENT: SURFACE PERFORATED INTERVAL:       

PRIMARY CEMENT TO SURFACE: Y

1 INCH INFORMATION: WEIGHT:        CEMENT TO SURFACE: Y

FEET:        SX:        CLASS:        %SALTS:        RETURNS:       

ADDITIONAL COMMENTS: Lead 10# Cal Seal Per. sx 4% gel, 4% cal chloride, 1/4# flowseal. Tail-2% cal seal 1/4# flow seal-77 bbls cement returned to pit. 788' of surface pipe left in hole after cut off.

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number:

ML-44333

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. If Indian, Allottee or Tribe Name:

N/A

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

7. Unit Agreement Name:

Kane Springs Federal Unit

1. Type of Well: OIL  GAS  OTHER:

8. Well Name and Number:

Kane Springs Unit #16-1

2. Name of Operator:

Coastal Oil & Gas Corporation

9. API Well Number:

43-019-31341

3. Address and Telephone Number:

P. O. Box 749 Denver, CO 80201-0749 (303) 573-4476

10. Field and Pool, or Wildcat:

Wildcat

4. Location of Well

Footages: 960' FSL & 1960' FWL (surface)

County: Grand

CO, Sec., T., R., M.: SE/SW Section 16, T25S-R18E

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

**NOTICE OF INTENT**  
(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other Confidential Status - Tite Hole
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion \_\_\_\_\_

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

\* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Please hold all information pertaining to the Kane Springs Unit #16-1 well confidential.



AUG 20 1993

DIVISION OF  
OIL, GAS & MINING

13.

Name & Signature:

*Eileen Danni Dey*  
Eileen Danni Dey

Title:

Regulatory Analyst

Date:

8/18/93

(This space for State use only)

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER:		5. Lease Designation and Serial Number: ML-44333
2. Name of Operator: Coastal Oil & Gas Corporation		6. If Indian, Allottee or Tribe Name: N/A
3. Address and Telephone Number: P. O. Box 749 Denver, CO 80201-0749 (303) 573-4476		7. Unit Agreement Name: Kane Springs Fed. Unit
4. Location of Well Footages: 960' FSL & 1960' FWL (surface) County: Grand QQ, Sec., T., R., M.: SE/SW Section 16, T25S-R18E State: Utah		8. Well Name and Number: Kane Springs Unit #16-1
		9. API Well Number: 43-019-31341
		10. Field and Pool, or Wildcat: Wildcat

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____  Approximate date work will start _____	<input type="checkbox"/> Abandonment * <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input checked="" type="checkbox"/> Other <u>Rotary Rig Spud</u>  Date of work completion _____  Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Spudded well w/rotary rig @ 10:00 p.m., 8/15/93. Drilled to 825'. Ran 20 jts 13-3/8" 54.5# J-55 ST&C casing and set @ 823'. Cemented w/450 sx HLC Type V cement plus additives. Cement in place 9:30 p.m., 8/17/93.

RECEIVED

AUG 23 1993

DIVISION OF OIL, GAS & MINING

13. Name & Signature: Eileen Darni Dey Title: Regulatory Analyst Date: 8/19/93

(This space for State use only)



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WATER RIGHTS

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Robert L. Morgan  
State Engineer

Southeastern Area  
453 South Carbon Avenue  
P.O. Box 718  
Price, Utah 84501-0718  
801-637-1303

RECEIVED

AUG 27 1993

DIVISION OF  
OIL, GAS & MINING

August 25, 1993

Charles R. Klepzig  
356 South Main  
Moab, Utah 84532

Re: Temporary Change Application #t93-05-02  
Expiration Date: November 30, 1993

CONFIDENTIAL

Dear Ray:

The above referenced Temporary Change Application is hereby approved. A copy is enclosed for your information and records.

If you have any questions, please feel free to contact me.

Sincerely,

Mark P. Page  
Regional Engineer

cc: Division of Oil, Gas & Mining

Enclosures  
MPP/mjk



RECEIVED

# APPLICATION FOR TEMPORARY CHANGE OF WATER

RECEIVED

Rec. by \_\_\_\_\_

Fee Paid \$ \_\_\_\_\_

Receipt # \_\_\_\_\_

Microfilmed \_\_\_\_\_

Roll # \_\_\_\_\_

AUG 27 1993

AUG 23 1993

## STATE OF UTAH

WATER RIGHTS PRICE

### DIVISION OF OIL, GAS & MINING

For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.

\*WATER RIGHT NO. 05 Area \_\_\_\_\_ \*APPLICATION NO. 193 05 02

Changes are proposed in (check those applicable)

\_\_\_\_\_ point of diversion.  place of use.  nature of use.  period of use.

#### 1. OWNER INFORMATION

Name: Charles R. Klepzig \*Interest: \_\_\_\_\_%

Address: 356 South Main

City: Moab State: Utah Zip Code: 84532

2. \*PRIORITY OF CHANGE: May 5, 1977 \*FILING DATE: August 23, 1993

\*Is this change amendatory? (Yes/No): No

3. RIGHT EVIDENCED BY: 05-1308 (A48704)

Prior Approved Temporary Change Applications for this right: \_\_\_\_\_

\*\*\*\*\* HERETOFORE \*\*\*\*\*

4. QUANTITY OF WATER: 0.10 cfs and/or \_\_\_\_\_ ac-ft.

5. SOURCE: Underground Water Well

6. COUNTY: Grand

7. POINT(S) OF DIVERSION: S. 865 ft. & W. 60 ft. from E 1/4 Cor. Sec. 2, T26S, R21E, SLB&M.

CONFIDENTIAL

Description of Diverting Works: Existing 10-inch diameter well

8. POINT(S) OF REDIVERSION  
The water has been rediverted from \_\_\_\_\_ at a point: \_\_\_\_\_

Description of Diverting Works: \_\_\_\_\_

9. POINT(S) OF RETURN  
The amount of water consumed is 0.10 cfs or \_\_\_\_\_ ac-ft.

The amount of water returned is \_\_\_\_\_ cfs or \_\_\_\_\_ ac-ft.

The water has been returned to the natural stream/source at a point(s): \_\_\_\_\_

\*These items are to be completed by the Division of Water Rights.

20. NATURE AND PERIOD OF USE

Irrigation: From \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_
Stockwatering: From \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_
Domestic: From \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_
Municipal: From \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_
Mining: From \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_
Power: From \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_
Other: From 8/20/93 to 11/30/93

21. PURPOSE AND EXTENT OF USE

Irrigation: \_\_\_\_\_ acres. Sole supply of \_\_\_\_\_ acres.
Stockwatering (number and kind): \_\_\_\_\_
Domestic: \_\_\_\_\_ Families and/or \_\_\_\_\_ Persons.
Municipal (name): \_\_\_\_\_
Mining: \_\_\_\_\_ Mining District at the \_\_\_\_\_ Mine.
Ores mined: \_\_\_\_\_
Power: Plant name: \_\_\_\_\_ Type: \_\_\_\_\_ Capacity: \_\_\_\_\_
Other (describe): Drilling fluid for exploration drilling

22. PLACE OF USE

Legal description of place of use by 40 acre tract(s):
Kane Springs Federal #16-1 Well:
N. 960 ft. & E. 1960 ft. from SW Cor. Sec. 16, T25S, R18E, SLB&M (SE 1/4).

CONFIDENTIAL

23. STORAGE

Reservoir Name: \_\_\_\_\_ Storage Period: from \_\_\_\_\_ to \_\_\_\_\_
Capacity: \_\_\_\_\_ ac-ft. Inundated Area: \_\_\_\_\_ acres.
Height of dam: \_\_\_\_\_ feet.
Legal description of inundated area by 40 tract(s): \_\_\_\_\_

24. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. Include any supplemental water rights used for the same purpose. (Use additional pages of same size if necessary): \_\_\_\_\_

\*\*\*\*\*

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

Charles R. Kling
Signature of Applicant(s)

STATE ENGINEER'S ENDORSEMENT

TEMPORARY CHANGE APPLICATION NUMBER: t93-05-02

1. August 23, 1993      Change Application received by MP.
2. August 25, 1993      Application designated for APPROVAL by MP.
3. Comments:

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Conditions:

This application is hereby APPROVED, dated August 25, 1993, subject to prior rights and this application will expire on November 30, 1993.



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Mark Page, Regional Engineer  
for  
Robert L. Morgan, State Engineer

# SOUTHEASTERN UTAH ASSOCIATION OF LOCAL GOVERNMENTS

P. O. Drawer • Price, Utah 84501 • Telephone 637-5444  
1106

WILLIAM D. HOWELL  
Executive Director

## AREAWIDE CLEARINGHOUSE A-95 REVIEW

14 01 07

NOI \_\_\_ Preapp \_\_\_ App \_\_\_ State Plan \_\_\_ State Action X Subdivision \_\_\_ (ASP # 8-713-1)

Other (indicate) \_\_\_\_\_ SAI Number UT930705-050

### Applicant (Address, Phone Number):

Oil, Gas and Mining  
355 West North Temple  
3 Triad Center Ste 350,  
Salt Lake City, Utah 84180-1203

### Federal Funds:

Requested: \_\_\_\_\_

### Title:

APPLICATION FOR PERMIT TO DRILL

**CONFIDENTIAL**

SEP 07 1993

DIVISION OF  
OIL, GAS & MINING

- No comment
- See comments below
- No action taken because of insufficient information
- Please send your formal application to us for review. Your attendance is requested

The applicant should forward any written review comments to the funding agency. Any written response to those comments should be forwarded to the State Clearinghouse and also to the funding agency.

### Comments:

SEUALG recommends a strong and direct affirmative response to this proposal from the State of Utah. Such a response would encourage other industry representatives who are for the moment on the sidelines to look more favorably at trust lands for exploration and production.

KANE SPRING UNIT 16-1

  
\_\_\_\_\_  
Authorizing Official

9-3-93  
\_\_\_\_\_  
Date



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

September 16, 1993

Paula Swain  
Coastal Oil & Gas Corporation  
P. O. Box 749  
Denver, Colorado 80201-0749

Re: 2nd Request for Completed Entity Action Form - Kane Springs  
16-1 SESW Sec. 16, T. 25S, R. 18E - Grand County, Utah

Dear Ms. Swain:

This is written to remind you that all well operators are responsible for sending an Entity Action Form to the Division of Oil, Gas and Mining within five working days of spudding a new well. This office was notified that your company spudded the Kane Springs 16-1 well, API Number 43-019-31341, on July 23, 1993. At this time, we have not received an Entity Action Form for this well.

Please review the instructions on the back of the enclosed form. Make sure you choose the proper Action Code to show whether the well will be a single well with its own sales facilities (Code A), a well being added to an existing group of wells having the same tank battery and common division of royalty interest (Code B - show existing Entity Number to which well should be added), or a well being drilled in the participating area of a properly designated unit (Code B). Complete the form and return it to us by September 30, 1993.

Your attention to this matter is appreciated. If we can be of assistance to you, please feel free to call Lisha Cordova at the above number.

Sincerely,

Don Staley  
Administrative Supervisor

lec  
Enclosure  
cc: R. J. Firth  
File

25 sks  
100 sks

100

20" @

CICR

7560'

4974'

Clastic - 5

5428'

Clastic - 9

4,339.6 ft/act

Kumuk A  
4320

4300' Paradox

If Plugged - we need a  
plug at bottom of white firm

D.

10/27/93

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1

Sec. 16-T25S-R18E

Kane Springs Unit

Grand County, UT

Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{3}{8}$ " @ 823'; 10 $\frac{3}{4}$ " @ 4995'

7 $\frac{5}{8}$ " @ 7600'

DHC(M\$): 2,240.0

- 7/23/93 MIRU, Drilling Service, build rat hole. Drill 30" hole to 67'. Set 20" @ 67' cmt w/7 yds Ready Mix. Drilled hole 7/24/93, 7:00 AM.
- 7/26/93 Dug rat hole and mouse and cellar, 10' X 8'.
- 8/10/93 MI Parker #233 - roading from Altamont, UT. Install liner. Rig moving from Altamont, UT. Trucks were on loc Saturday, Started hauling Sunday, 8/8/93. CC: \$18,638.
- 8/11/93 MIRU. CC: \$18,638.
- 8/12/93 Prep to RURT. MIRT, set matting boards. Level rig pad. Haul in sand and gravel for rig base. CC: \$58,010.
- 8/13/93 RURT. Est spud date Sunday, 8/15/93. CC: \$59,469.
- 8/16/93 139' Drlg 50'/4 hrs. Spud @ 10:00 PM, 8/15/93. RURT. Install rotating head. PU BHA, install blooie line and RU air. Drill, RU air/mist line. Drill, PU 9" collar, 3 PT and change out rotating head rubber. Drill. CC: 102,199.
- 8/17/93 710' Drlg 571'/18 $\frac{1}{2}$  hrs. Remove and install RT rubber. Drlg w/air. RS, drlg w/air, svy. Ream and blow hole. Drlg w/air. Blow hole, hit wtr 2 518', begin airmisting @ 545'. Drlg, blow and clean hole from 518-545'. Drlg, svy, drlg. Svys:  $\frac{1}{2}$ ° @ 266';  $\frac{1}{2}$ ° @ 616'. CC: \$207,199.
- 8/18/93 825' Cut off conductor pipe 115'/3 $\frac{1}{2}$  hrs. Drlg to 825'. Circ & blow hole, finish short trip. Short trip to 3 PT free. Svy. Pump gelled sweep and load hole. TOOH, LD 1-9" DC, 6 PT, SS, 2 3 PT rmrs. RU Csg Tools, RIH w/20 jts 13 $\frac{3}{8}$ " 545# J55 8RD ST&C csg, tally row = 829.21', set @ 823', FC @ 786'. RU Howco, pump 20 bbls fresh wtr. Mix & pump 450 sx HLC Type V cmt w/10# sx CalSeal, 4% gel, 1% CaCl<sub>2</sub> tail w/380 sx Type V w/2% CaCl<sub>2</sub>,  $\frac{1}{4}$ # sx flocele. Disp w/124 BW, bump plug to 800 psi, 500 psi over. Circ 74 bbls cmt to pit. WOC. Cmt in place @ 9:30 PM, 8/17/93. Cut off and cond csg. Witnessed by Glenn Goodwin, State of UT Div of OG&M. Svy:  $\frac{1}{4}$ ° @ 880'. CC: \$248,997.
- 8/19/93 825' NU and test BOPE. Cut off csg. Install csg head and well. Test weld to 750 psi - ok. NU BOPE and chk lines. Fabricate blooie line and modify chk line. Chg out pipe rams from 3 $\frac{1}{2}$ " to 5". Test BOPS, leak between BOP and double stud adapter, 10M flange. ND BOPS to change ring gasket. CC: \$282,293.
- 8/20/93 825' Blow hole dry to drill out. NU and test lower pipe rams. Leaking between double stud adapter and lower pipes. ND BOPS; remove double stud adapter. WO double stud adapter from Oil Field Rental; PU 6 PT, SS, 3 PT, 3 PT, LD 5-8 $\frac{1}{2}$ -9" DC. NU BOPS and test BOPE to 5000 psi, hydril to 2500 psi, csg to 1550 psi. All tests were valid but not witnessed; notified Frank Matthews w/UT State DOGM. Set wear bushing. PU BHA. TIH, tag cmt @ 768'. Blow hole dry. CC: \$317,691.
- 8/21/93 1678' Fill pipe w/wtr, TFNB #3 853'/18 hrs. Drlg cmt, FC, cmt shoe. Dry hole. Drlg w/air. Svy. Drlg w/air. RS. Drlg w/air, hit wtr @ 1470'. Unload hole. Drlg w/air mist. Svy. Drlg. Fill pipe w/wtr. TFNB. Svys:  $\frac{1}{2}$ ° @ 957',  $\frac{1}{4}$ ° @ 1440'. CC: \$330,909.
- 8/22/93 2260' Drlg 582'/18 $\frac{1}{2}$  hrs. TFNB, drlg w/air mist. Reserve pit full. RS. Drlg w/wtr. Trip for string float. Svy. Drlg w/aerated wtr. Svy:  $\frac{3}{4}$ ° @ 1984'. CC: \$354,266.

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 2

- 8/23/93 2925' Drlg 665'/23 hrs. Drlg w/aerated wtr. RS. Svy. Drlg w/wtr and aerated wtr. Svy: 1½° @ 2486'. CC: \$363,963.
- 8/24/93 3375' Drlg 450'/22 hrs. Drlg w/wtr. Svy. Drlg w/aerated wtr. RS. Drlg w/air/aerated wtr. Change out swivel packing. Drlg. Svy: 1° @ 2885'. CC: \$376,866.
- 8/25/93 3667' Drlg w/air and wtr 292'/22 hrs. Drlg w/air and wtr w/750 CFM. RS and check BOPS. WL svy @ 3383'. Change out rot head rubber. Drlg w/air and wtr w/750/2000 CFM. WL svy @ 3647'. Drlg w/air and wtr w/1200 CFM. Svy: 2° @ 3383', 1¼° @ 3647'. Wtr/aerated wtr, MW 8.4, VIS 27. CC: \$391,576.
- 8/26/93 3931' Drlg w/air and wtr 264'/23½ hrs. Drlg w/air and wtr. RS and check BOPS. Drlg w/air and wtr. Wtr, MW 8.4, VIS 27. CC: \$401,734.
- 8/27/93 4185' Drlg w/air and wtr. 254'/16 hrs. Drlg w/air & wtr, load hole w/wtr before trip. Svy: 2° @ 3926'. TFNB. Rls & check BOP's. TIH w/bit & PU six 6¾" DC's & change out jars. Wash 40' to btm, 10' fill. Drlg w/wtr. Unload hole w/air. Drlg w/air & wtr. 1st Ismay approx 4235', Honaker Trail 40% LS, 60% SH, BGG 2, CG 0, TG 0. MW 8.4, VIS 27. CC: \$424,545.
- 8/28/93 4738' Drlg w/air and wtr. 553'/23 hrs. Drlg w/air & wtr. Rls & check BOP's. Drlg w/air & wtr. WL svy: 1½° @ 4495'. Drlg w/air & wtr. Est Paradox Salt #2 @ 4300', Clastic #2 @ 4528', Salt #3 @ 4610', Clastic #3 @ 4680', 40% SH, 30% siltstone, 30% SS, BGG 2, tr CG. MW 9.8, VIS 27. CC: \$443,727.  
Drlg Break      MPF      Gas Units  
4260-4270'      8-3½-5      tr-1200-tr      Gas cut wtr.
- 8/29/93 4995' TIH w/bit & Monel DC. 257'/6½ hrs. Drlg w/air & wtr. Rls & check BOP's. Drlg w/air & wtr. Circ for short trip. Drlg 10'. ST 15 std, 5' fill. C&C for logs. Svy: 1¼° @ 4960'. TOO H for logs & SLM 4997.62'. RU Schlumberger & run DLL-GR-CAL, Sonic from TD to sfc csg & GR to sfc. Logger TD 4999', BHT 136°F, RD logger. Pull wear bushing & LD shock sub & 3 pt reamer. WO Monel DC. TIH w/bit & Monel DC. MW 9.8, VIS 27. CC: \$460,839.  
DC: \$460,839.
- 8/30/93 4995' ND BOP's & prep to set csg slips. Finish TIH w/bit & Monel DC. Wash 50' to btm, no fill. C&C from csg. TOO H w/bit & run multi-shot svy. RU, LD machine, & 12 - 8¼" DC, Monel DC, reamer. RU T&M csg crew. Run 117 jts 10¾" 60.7# S-95 Hyd-521, equip w/diff shoe & float, and 20 centralizers, total 5010.18'. RU Halliburton & circ csg before cmt. Cmt w/Halliburton, pump 40 bbls Super Flush, 690 sx Silica Light w/.4% gel, 4% CaCl<sub>2</sub>, .3% Halad-413, ¼ pps Flocele, 3 pps Capseal, wt 11.0, yd 2.82 CF/sx, tailed w/1145 sx PPAG Type 5, 10% salt, .6% Halad-322. CC: \$739,100.
- 8/31/93 4995' TIH w/bit. Prep to test csg. PU BOPS and set slips w/275,000#. Cut 10¾" csg. NU head. Test head w/1500 psi. Test backside to 4400 psi. NU BOPS. Test BOPS, valves, lines, manifold, chk, U&L kelly cock to 10,000 psi for 10 min, hydril 2500 psi for 10 min. PU bit, install wear bushing. PU BHA and install drill pipe rubbers. TIH, prep to test csg and disp wtr w/oil mud. MW 14.3, VIS 75, HTFL 3.2, PV 55, YP 30, 73/27% OIL, ALK 4.5, LM 5.8, CL 20M. CC: \$759,236.
- 9/1/93 5069' TOO H for plugged bit 74'/4½ hrs. Test csg w/3000 psi. Drill float, shoe jt and shoe. Drill 4995-5005'. C&C. Tested shoe to 18.5 EMW w/13.9 ppg mud and 1200 psi surf press - ok. Drill 5009-5069'; bit plugged. Slug pipe and POOH. MW 13.8, VIS 68, HTFL 1.8, PV 42, YP 30, 56% OIL, 25% SOL, PH 960, ALK 4.5, LM 5.8, CL 116, CA 74/26, GELS 8, 10" 12, CAKE 1. CC: \$809,948.

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 3

- 9/2/93 5542' Drlg 473'/15½ hrs. POOH - pull wear ring. Finish POOH. Change jets in bit, install wear ring, PU 6 DC's, TIH. Drlg, RS, drlg. Work tight hole @ 5308'. Drlg, circ - WL Svy - mis-run. Drlg, circ - WL Svy, drlg. BG 35, CG 0, TG 31. NOTE: Bit jets plugged w/plastic ties stock @ 5308' twice; pulled loose each time with hit from jars. Svy: 1½° @ 5357'. MW 14.0, VIS 55, HTFL 200 psi 1.8, PV 37, YP 28, 56% OIL, 24.5% SOL, PH 880, ALK 5, LM 6.5, CL 160,000, CA 74/26, GELS 7, 10" 10, CAKE 1. CC: \$838,316.
- 9/3/93 6160' Drlg 618'/22½ hrs. Drlg, RS, drlg, circ - WL svy, drlg. Formation elastic #15, BG 20, CG 2, Svy - none. Lost approx 38 bbls mud due to seepage last 24 hrs. Started nut-plug this AM. Svy: 1¼° @ 5840'. MW 145, VIS 50, HTFL 1.6, PV 31, YP 24, 57% OIL, 25% SOL, PH 1040, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 10, CAKE 1. CC: \$863,952.
- 9/4/93 6627' Drlg 467'/18 hrs. Drlg, RS, drlg, work tight hole 6230-6275'. Drlg, circ, WL Svy, drlg - some tight conn w/jars. Circ & pump LCM sweep; spot same behind DC & DP. Short trip 17 stds @ 6527'; no drag - no fill; hole clean. Drlg - control drlg 20 hrs - no problems. Salt #19, BG 12-14, CG 1-2, dn time @ 6277 = 55 min. Short trip 13. Note: Est KOP @ 6711. Svy: ¾° @ 6356'. MW 14, VIS 48, HTFL 10.4, PV 30, YP 23, 57% OIL, 25% SOL, PH 1020, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 9, CAKE 2. CC: \$892,569.
- 9/5/93 6711' RD Schlumberger 84'/5 hrs. Drlg, RS, Drlg to 6711' KOP. C&C, short trip 10 stds; no drag - no fill. C&C for log. Tripping out (SLM) w/multi-shot to csg shoe @ 4995'. Retrieve multi-shot w/WL. Ran gyro thru DP on WL to 900'. Finish TOH (SLM), LD BHA. Change out wear bushing. RU Schlumberger and ran GR, Sonic Caliper log 6714' to surface. WLTD 6714', board 6711', SLM 6715'. RD Schlumberger. Salt #19, BG 12, CG 1-2, short trip 50 @ 6711'. Svy: 2¼° multi-shot @ 6711' S18W. MW 14, VIS 49, HTFL 10.6, PV 30, YP 22, 58% OIL, 25.2% SOL, PH 1000, ALK 5, LM 6.5, CL 196,000, CA 77/23, GELS 7, 10" 9, CAKE 2. CC: \$919,663.
- 9/6/93 6843' Slide drlg 128'/13 hrs. PU directional tools - BHA and HWDP. RD LD mach. TIH, replace bad DP rubbers. Circ & orient motor. Slide drlg 6715-6843', building angle. Clastic #19, BGG 20-30, CG 2-4, TG 63 after logging. Tops: Clastic #19 @ 6818'. Pick up wt 210,000, slack out wt 200,000. MW 14.2, VIS 52, HTFL 10.0, PV 32, YP 22, 58% OIL, 26.3% SOL, PH 990, ALK 5.4, LM 70, CL 187,000, CA 78/22, GELS 6, 10" 8, CAKE 2. CC: \$951,219.
- | <u>Drlg Breaks</u> | <u>MFP</u> | <u>Gas Units</u> |  |
|--------------------|------------|------------------|--|
| 6824-6828'         | 25-5-14    | 12-100-25        |  |
| 6830-6832'         | 18-5-15    | 25-136-30        |  |
- 9/7/93 6915' Drlg 72'/22½ hrs. Slide drlg 6843-6854', building angle. RS, slide drlg 6854-6858', building angle. Circ out gas 6858', max 9600, mud cut 14.2-12.6. Slide drlg 6858-6915', building angle. Now building md wt 15.3-15.6. Salt #20 @ 6899', BG 4640 w/15.3, CG 9280 @ 6885' w/14.9, FCD .4, pick up wt 210,000, slack out wt 200,000. MW 15.3, VIS 52, HTFL 9.6, PV 38, YP 24, 56% OIL, 30.5% SOL, PH 1060, ALK 6.5, LM 8.4, CL 187,000, CA 80/20, GELS 7, 10" 10, CAKE 2. CC: 9278,936.
- | <u>Drlg Breaks</u> | <u>MFP</u>   | <u>Gas Units</u> |   |
|--------------------|--------------|------------------|---|
| 6842-6848'         | 25-12-20     | 25-70-50         | SH blk sft carb.  |
| 6852-6864'         | 30/18-6-8/35 | 45-7000-5120     | SLTST lt gry-gry brn, vfxln sft dol.<br>TVD Clastic #19 = 6812' MD = 6816'. |
- 9/8/93 6966' Install wear bushing. Prep to TIH 51'/3 hrs. Slide drlg from 6917-6966'. C&C mud, raise wt to 16.5. Short trip 5 stds, hole free; short trip BGG 9600 U max. C&C mud, raise wt to 17.0 (mud cut from 16.5 to 14.5 after short trip). Short trip 5 stds, hole free; short trip gas 7360 U. C&C mud; mud, gas cut .3 lb/gal; BGG 2560 U. TOOH, LD 18 jts DP, remove DP rubbers, install wear bushing. Salt #20, 6899'. MW 17°, VIS 56, HTFL 10.4, PV 48, YP 28, 53% OIL, 36.9% SOL, PH 1040, LM 7.25, CL 196,000, CA 85/15, GELS 8, 10" 10, CAKE 2. CC: \$1,010,769.

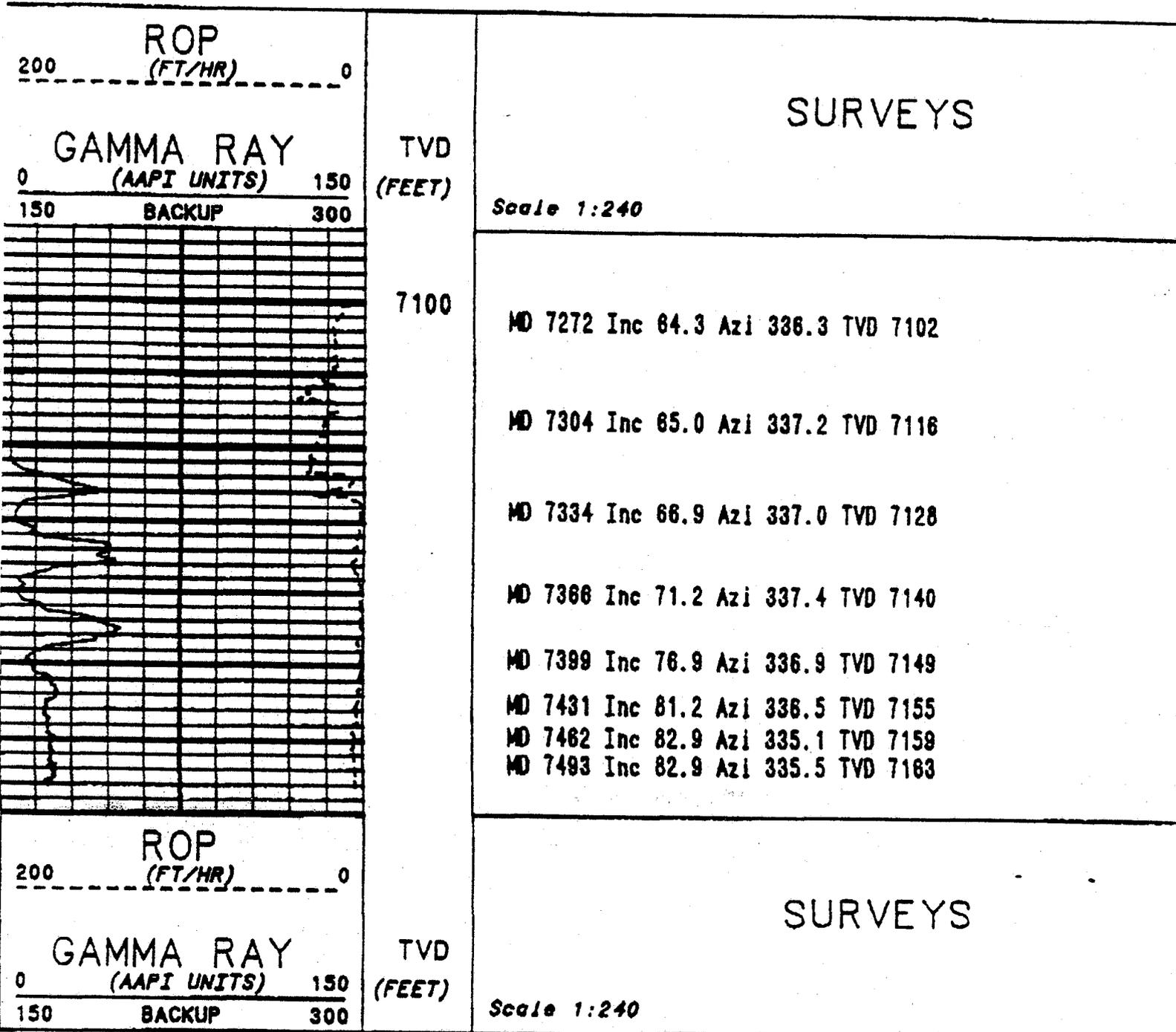
**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 4

- 9/9/93 6966' TIH w/PDC and 2° X 1° directional assembly. Change BHA. Work BOPS. TIH. Could not get thru KOP @ 6715'. Circ out gas. Had intermittent flare of 15'. Orient tools. Slide ream 6709-6799'. Started taking wt, 167' off btm. Bit is in 19-22°/100 build. Circ out gas. TOOH. LD 1° motor. PU 2° X 1° motor to ream w/same assembly which drilled original hole. Cut drill line. Continue TIH hole 100' from KOP @ report time. MW 17.4, VIS 59, HTFL 10.8, PV 46, YP 24, 52% OIL, 37.9% SOL, PH 1080, ALK 5.6, LM 7.3, CL 206,000, CA 84/16, GELS 7, 10" 9, CAKE 2. CC: \$1,032,126.
- 9/10/93 6966' MU BHA #5 and TIH. TIH, W&R from 16,756' to 6802'. C&C mud. TOOH, LD BHA. PU hole opener w/2' bull nose and 6 pt, TIH. Attempt to get in hole w/wtr - no luck. C&C mud. TOOH, LD HO and 6 pt rmr. PU PT 2½° Motor and BHA and TIH. MW 17.5, VIS 64, HTFL 11, PV 49, YP 22, 50% OIL, 38.8% SOL, PH 1110, LM 7.0, CL 196,000, CA 82/18, GELS 7, 10" 10, CAKE 2. CC: \$1,056,242.
- 9/11/93 6832' 6828' TVD. Slide drill w/PDC bit & PT 2°x1° motor 29'/8 hrs. TIH, fill pipe @ 2100' and 5100'. Drlg from 6803-6819'. C&C hole. Pump pill. TOOH, LD motor, work BOPS, PU PT 2°x1° motor, PDC bit. TIH, fill pipe @ 2500' and 5100', orient motor. Slide drill from 6819-6832'. TVD 6827'. MW 17.6, VIS 74, HTFL 10.6, PV 55, YP 21, 52% OIL, 40% SOL, PH 1120, LM 62, CL 215,000, CA 85/15, GELS 7, 10" 10, CAKE 2. CC: \$1,083,471.
- 9/12/93 6911' 6899' TVD. Drlg 79'/24 hrs. Slide drlg sidetrack #1, MW 17.6 in/17.3 out, VIS 61, HTFL 10.6, PV 52, YP 23, 51% OIL, 38.5% SOL, PH 1040, LM 9, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,107,451.
- 9/13/93 7070' 7010' TVD. Drlg 159'/24 hrs. Slide drlg. MW 17.5, VIS 55, HTFL 10.2, PV 512, YP 24, 51% OIL, 39% SOL, 1060 PH, LM 9.3, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,128,155.
- 9/14/93 7125' Slide drill 55'/4½ hrs. Slide drlg to 7094'. Circ btm up, pump pill. TOOH, LD jt 6" DP. Jar out of hole from 6995 (48°) to 6893' (29°). Ream from 6893' to 7094'. Circ, mix and pump pill. TOOH, LD 12 jts 6" DP. Run leak off test to 18.5 equiv at csg shoe, bled off 10 psi in 6 min. PU 1° mud motor, TIH. W&R from 7067' to 7094'. Slide drlg. MW 17.7, VIS 72, HTFL 10, PV 58, YP 28, 51% OIL, 39% SOL, PH 1180, LM 9, CL 215,000, CA 86/14, GELS 8, 10" 12, CAKE 2. CC: \$1,152,510.
- 9/15/93 7257' C&C mud for trip and for motor 132'/6½ hrs. Drlg and rot from 7125-7257'. Pump pill, short trip 12 stds; 4th std tight. TIH 8 stds, hit bridge @ 6839'. Attempt work 1° mud motor thru bridge; hole sticky and tight; C&C. TOOH w/1° motor and LD. PU bit, 3 pt, XO and TIH to 6839'. Begin circ and W&R from 6839-7258'. C&C for short trip; short trip 5 stds - no tight spots. C&C mud. MW 17.8, VIS 61, HTFL 10.6, PV 58, YP 26, 51.5% OIL, 42% SOL, PH 1760, LM 9.0, CL 215,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,180,010.
- 9/16/93 7327' TIH w/1½° motor & MWD 70'/5 hrs. C&C, mix and pump pill. TOOH w/bit for motor. Change out BHA, LD 3 pt & bit, check blind rams and PU mud motor and MWD, change out stab, and align motor w/MWD. TIH w/1° motor and MWD and change out jars. W&R from 7214' to 7257'. Slide drlg from 7257-7289'. Drlg & rot from 7289-7327'. Circ btm up from top Kane Creek and mix pill and pump. TOOH for 1½° motor or change. Check blind rams and change motor and LD stab and align motor w/MWD. TIH w/1½° motor and MWD and fill DP @ 2500' and 5100'. MW 17.6, VIS 55, HTFL 10.2, PV 51, YP 23, 53% OIL, 38% SOL, PH 1320, LM 9.0, CL 215,000, CA 85/15, GELS 8, 10" 11, CAKE 2. CC: \$1,207,860.
- 9/17/93 7374' Slide drlg 47'/23 hrs. Slide drlg from 7327-7361'. Change hose, quick conn on std pipe, finish drlg recorder and visulogger. Slide drlg from 7361-7374'. MW 17.4, VIS 52, HTFL 11.0, PV 51, YP 20, 53% OIL, 38% SOL, PH 1450, LM 7.8, CL 200,000, CA 84/16, GELS 7, 10" 9, CAKE 2, ECD 17.9 lb/bbl. CC: \$1,230,743.



GAMMA RAY

0 (AAPI UNITS) 150

150 BACKUP 300

MD (FEET)

7300

Scale 1:240

MD 7304 Inc 85.0 Azi 337.2 TVD 7118

MD 7334 Inc 86.9 Azi 337.0 TVD 7128

MD 7386 Inc 71.2 Azi 337.4 TVD 7140

7400

MD 7399 Inc 78.9 Azi 336.9 TVD 7149

MD 7431 Inc 81.2 Azi 336.5 TVD 7155

MD 7482 Inc 82.9 Azi 335.1 TVD 7159

MD 7493 Inc 82.9 Azi 335.5 TVD 7163

7500

ROP (FT/HR)

200 ----- 0

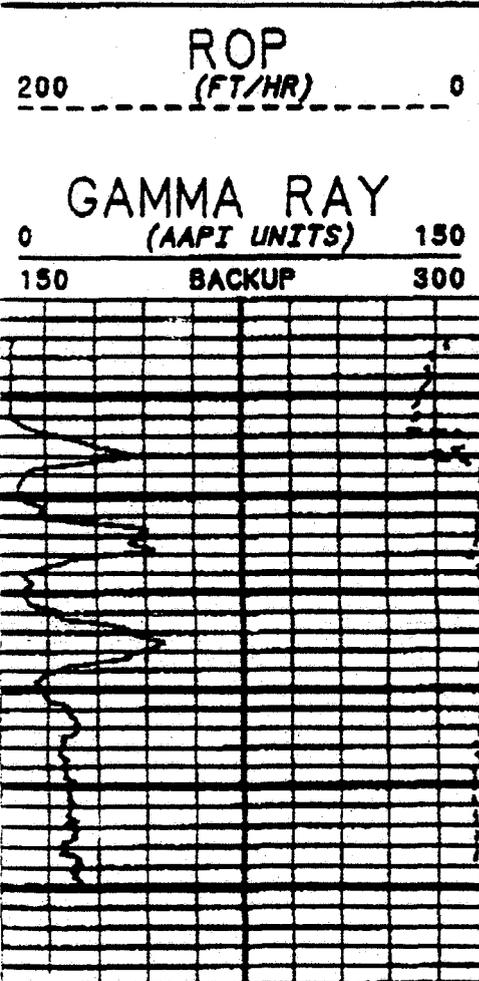
GAMMA RAY

0 (AAPI UNITS) 150

150 BACKUP 300

MD (FEET)

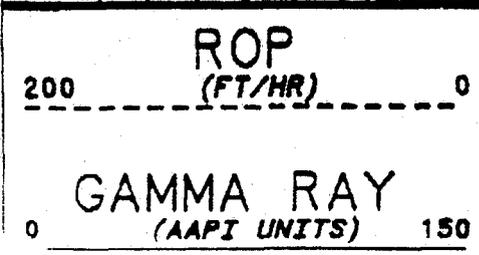
Scale 1:240



SURVEYS

Scale 1:240

- MD 7304 Inc 65.0 Azi 337.2 TVD 7118
- MD 7334 Inc 66.9 Azi 337.0 TVD 7128
- MD 7366 Inc 71.2 Azi 337.4 TVD 7140
- MD 7389 Inc 76.9 Azi 336.9 TVD 7149
- MD 7431 Inc 81.2 Azi 336.5 TVD 7155
- MD 7462 Inc 82.9 Azi 335.1 TVD 7158
- MD 7493 Inc 82.9 Azi 335.5 TVD 7163
- MD 7525 Inc 82.5 Azi 335.5 TVD 7167



SURVEYS

150

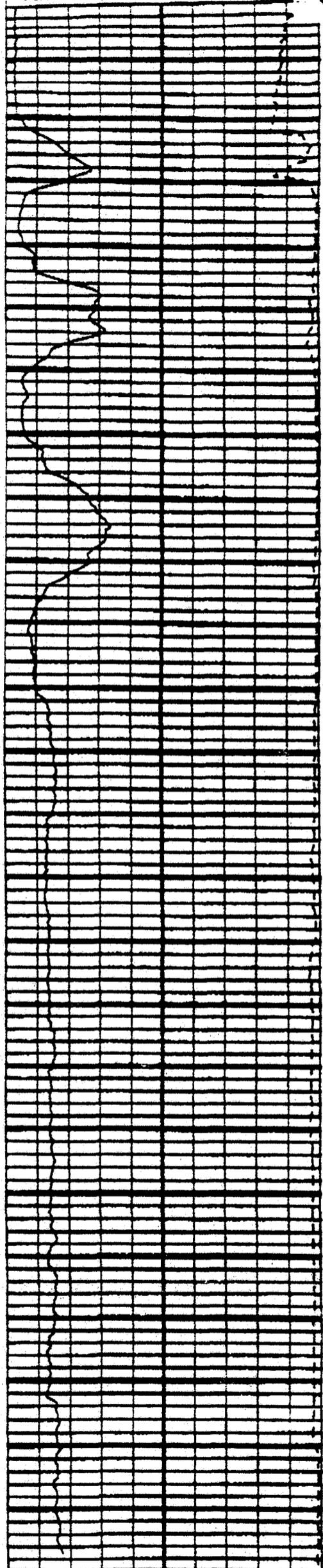
BACKUP

300

700

Scale 1:240

9/24/93



7400

7500

MD 7304 Inc 65.0 Azi 337.2 TVD 7118

MD 7334 Inc 66.9 Azi 337.0 TVD 7128

MD 7366 Inc 71.2 Azi 337.4 TVD 7140

MD 7399 Inc 76.9 Azi 336.9 TVD 7149

MD 7431 Inc 81.2 Azi 336.5 TVD 7155

MD 7482 Inc 82.9 Azi 335.1 TVD 7159

MD 7493 Inc 82.9 Azi 335.5 TVD 7163

MD 7525 Inc 82.5 Azi 335.5 TVD 7167

200

ROP  
(FT/HR)

0

SURVEYS

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

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- 9/18/93 7375' W&R to btm @ 7350' 1<sup>1</sup>/<sub>4</sub> hrs. Slide drlg from 7374-7375'. C&C, mix and pump pill. TOO H w/motor and bit — stuck @ 7321' and jar out of hole to 7118'. Finish TOO H w/motor and bit. Drag from 7118' to 7024' w/25,000 psi. LD motor and sperry sun, tool. PU 3 pt and 6 pt and TIH w/bit to shoe. Cut drlg line. Finish TIH w/bit to 7181'. W&R from 7181' to 7375'. Lost 10 bbls in seepage. MW 17.3, VIS 62, HTFL 11.6, PV 53, YP 28, 52% OIL, 36.8% SOL, PH 1460, LM 7.8, CL 200,000, CA 83/17, GELS 10, 10" 13, CAKE 2. CC: \$1,250,500.
- 9/19/93 7399' Slide drlg 24<sup>1</sup>/<sub>13</sub> hrs. C&C, mix and pump pill. TOO H w/3 pt, 6 pt and bit. LD rmr, PU new motor and change bend, align w/MWD and make up MWD. TIH w/bit and motor. Begin circ and orient tool. Slide drlg from 7375-7399'. MW 17.4, VIS 59, HTFL 12.8, PV 52, YP 26, 53% OIL, 39% SOL, PH 1380, ALK 5.0, LM 6.5, CL 203,000, CA 85/15, GELS 7, 10" 12, CAKE 2. CC: \$1,278,367.
- 9/20/93 7413' Slide drlg @ 7413' 14<sup>1</sup>/<sub>11 1/2</sub> hrs. Slide drlg from 7399-7408'. RS and check BOPS. Pump pill and TOO H w/bit and motor. Change bit, check blind rams. TIH w/bit and motor to 5070'. Fill pipe and check motor and MWD. TIH w/bit and motor to 6946'; hit bridge, attempt to turn motor — wouldn't go. W&R from 6946-7408'. Ream hard from 6946-7033' — still wouldn't go without pump. Slide drlg from 7408-7413'. MW 17.5, VIS 62, HTFL 11.2, PV 52, YP 28, 54% OIL, 39% SOL, PH 1400, ALK 5.0, LM 6.5, CL 200,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,330,876.
- 9/21/93 7433' Slide drlg @ 7433' 20<sup>1</sup>/<sub>8 1/2</sub> hrs. Slide drlg from 7413-7423'. Circ, mix and pump pill. TOO H for 1° motor. Align MWD, change degree on motor and PU stab. Open blind rams and RS. TIH w/1° motor and bit; slips slipping in DP. WO DP slips from Vernal. TIH to 5074'. Fill pipe and check MWD and motor. TIH w/bit and motor, hit bridge @ 6839', orient motor and fall thru. Slide drlg from 7423-7433'. MW 17.6, VIS 58, HTFL 11.6, PV 50, YP 21, 57% OIL, 36.3%, PH 1480, ALK 5.5, LM 7.1, CL 200,000, CA 89/11, GELS 7, 10" 10, CAKE 2, ECD .4 lb/bbl. CC: \$1,351,041.
- 9/22/93 7530' Slide drlg 97<sup>1</sup>/<sub>23 1/2</sub> hrs. Slide drlg from 7433-7445'. RS. Slide drlg from 7445-7450'. Rotate drlg from 7450-7528'. Slide drlg from 7528-7530'. Cane Creek, BGG 1500/1600, CG 3080/7509, no shows. String wts: pickup 210,000#, slack-off 185,000#, rotating 195,000#; torque 115 amps. MW 17.4, VIS 54, HTFL 12.0, PV 48, YP 22, 57% OIL, 37% SOL, PH 1500, ALK 6.0, LM 7.8, CL 220,000, CA 89/11, GELS 8, 10" 13, CAKE 2. Projected Svy @ 7530': inclination 82°, direction 335.3°, TVD 7168.18', vertical section 474.42', coordinates 423.00'N 214.82'W, DLS 1.40°/100'. CC: \$1,380,688.
- 9/23/93 7581' Slide drlg 51<sup>1</sup>/<sub>23 1/2</sub> hrs. Slide drlg 7530-7540'. RS. Slide drlg 7540-7581'. Cane Creek BG 1400/1600, CG 2320/7571, down time pump 1920/7565, PU 210,000, SO 185,000. NOTE: Analine point of diesel is 152°. MW 17.5, VIS 55, HTFL 11.4, PV 50, YP 28, 55% OIL, 39% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 89/11, GELS 7, 10" 12, CAKE 2. See attached svy report for svys. CC: \$1,401,334.
- 9/24/93 7,603' C&C for short trip 22<sup>1</sup>/<sub>9</sub> hrs. Slide drlg 7581-7586'. Rotate drlg 7586-7603'. Mix and pump slug. POOH. LD BHA and tools. PU new BHA, TIH to 7323'. W&R 7323-7603. C&C for short trip. A-5 Anydrite @ 7592' MP, BG 1040, CG @ 7571' - 2320, down time 2240, trip 8800' behind gas buster w/20' intermitted flare. NOTE: did not touch anything, TIH to 7323'; #1 pump down. See attached svy report for svys. MW 17.6, VIS 59, HTFL 11.6, PV 55, YP 26, 53% OIL, 40% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,421,921.
- 9/25/93 7603' TIH w/7<sup>5</sup>/<sub>8</sub>" liner @ 6000'. Short trip 11 stds - ok. C&C for csg. Short trip - ok. C&C for csg. Mix and pump slug - drop rabbit. POOH SLM, DL BHA. RU csg crew. PU and ran 7<sup>5</sup>/<sub>8</sub>" liner, 62 jts 39# S-95 Hydril 521 and liner hanger w/pkr. RD csg tools. TIH w/liner, SLM; fill every 9 stds. Shoe now @ 6000'. MW 17.6, VIS 59, HTFL 11.7, PV 58, YP 23, 54% OIL, 40% SOL, PH 1600, ALK 5.5, LM 7.1, CL 190,000, CA 88/12, GELS 8, 10" 15, CAKE 2. CC: \$1,499,343.

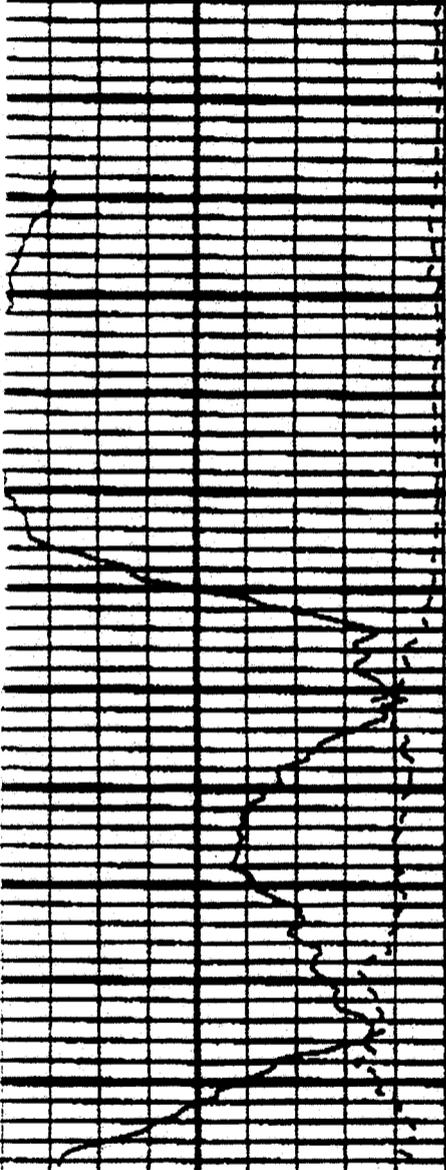
Bit Grade: T B  
Bit Grade Other :

Total Drig/Cir hrs for Motor :  
At Report Time : 2400

Chronological History  
9/29/93

ROP  
(FT/HR)

GAMMA RAY  
(AAPI UNITS) 150  
0 BACKUP 300



MD  
(FEET)

7600

### SURVEYS

Scale 1:240

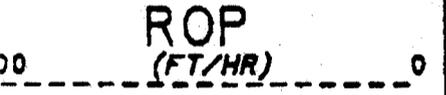
MD 7589 Inc 77.5 Azi 334.0 TVD 7178

MD 7619 Inc 77.7 Azi 333.0 TVD 7185

MD 7650 Inc 77.8 Azi 332.5 TVD 7191

ROP  
(FT/HR)

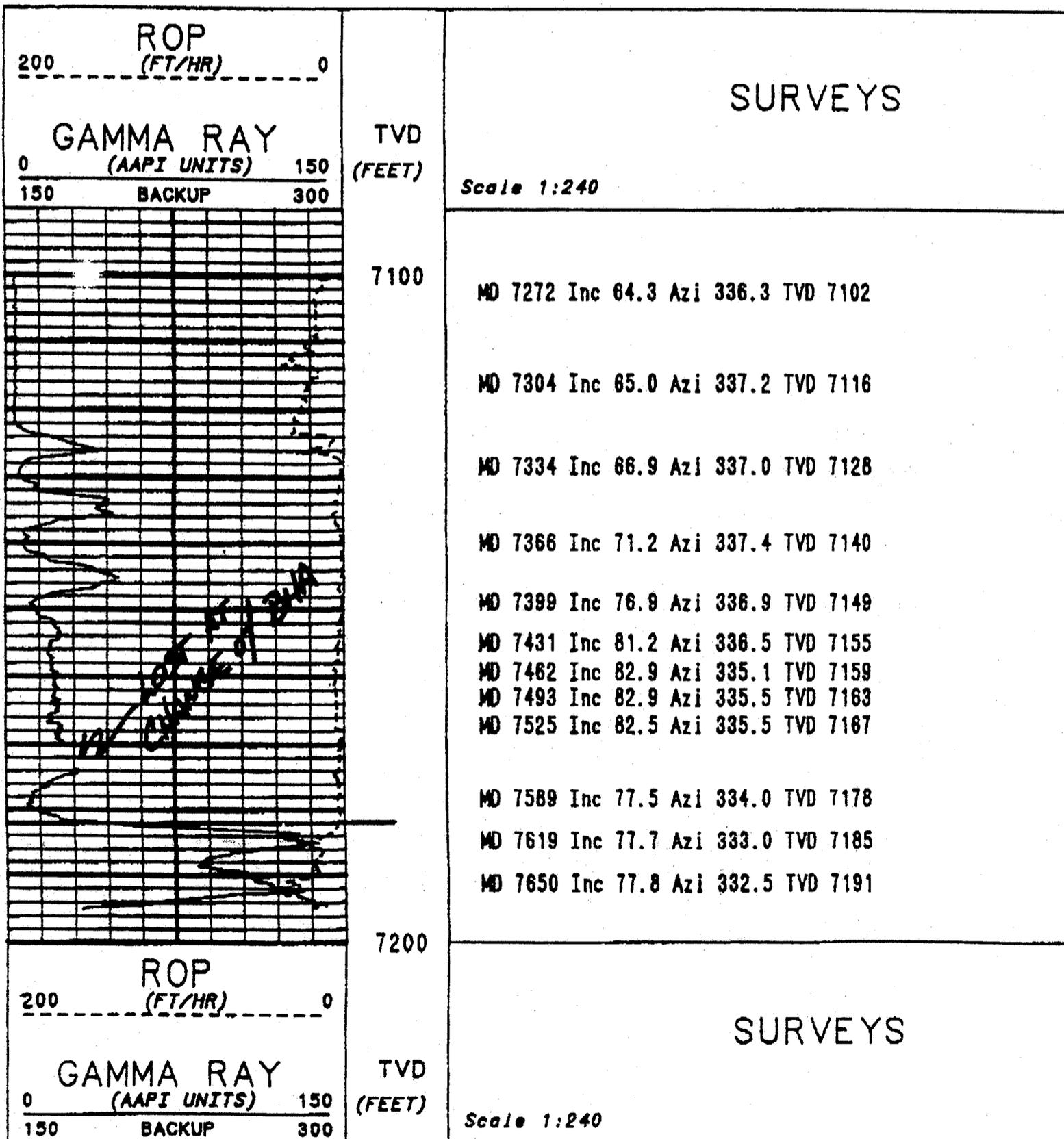
GAMMA RAY  
(AAPI UNITS) 150  
50 BACKUP 300



MD  
(FEET)

### SURVEYS

Scale 1:240



**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

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- 9/26/93 7603' Rig repair - #1 pump. Finish TIH w/7 $\frac{5}{8}$ " liner. RU Howco. Circ out gas. Hang liner and cmt by Howco w/30 bbk SAM-4 spacer @ 18#, 175 sx poz scavenger @ 14#, 470 sx Premium AG-250 w/40# Hidense and .5% Halad 322 @ 19# and .2% CBL. Disp w/20 bbls SAM-4 spacer and 170 bbls invert mud @ 17.6#. Bump plug w/1400 psi @ 11:46 AM, 9/25/93. Float held ok; had good circ thru job. Reversed out 8 bbls cmt and 30 bbls scavenger. Set pkr, PU and circ (reverse), press test pkr to 1000 psi - ok. RD Howco. TOOH 37 stds; TIH w/HWDP. RU LD mach and LD HWDP and excess DP. MW 17.7, VIS 62, HTFL 10.6, PV 59, YP 27, 55% OIL, 40% SOL, PH 1530, ALK 5.0, LM 6.5, CL 190,000, CA 90/10, GELS 9, 10" 15, CAKE 2. CC: \$1,608,126.
- 9/27/93 7603' TIH w/6 $\frac{1}{2}$ " bit to clean out liner. Change out pump #1. Change top set of pipe rams to variable. Test BOPS's and manifold variable rams on 4" and 5" DP to 10,000 psi, Hydril on 4" and 5" to 2500 psi, upper and lower kelly valves and relayed equipment to 10,000 psi. Change out tongs and RU floor to run 4" DP. PU BHA and SLM, TIH. MW 17.7, VIS 69, HTFL 10.8, PV 57, YP 27, 55% OIL, 40% SOL, PH 1500, ALK 5.0, LM 5.6, CL 190,000, CA 90/10, GELS 8, 10" 14, CAKE 2. CC: \$1,622,434.
- 9/28/93 7606' Drlg new formation 3 $\frac{1}{2}$  hrs. RD T&M — change out elevators and tongs. Finish TIH w/5" DP and tag top of liner @ 4765'. Drlg — clean out top of liner. Press test csg and liner to 1065 psi; lost 15 psi in 15 min (17.6). TIH and tag up @ 7505'; had 1' cmt on top of landing collar. Drlg landing collar and float. Drlg cmt and shoe; cmt drilled @ 20'/hr. Drlg new formation. BG 26, 50% anhydrate, 50% cmt. MW 16.0, VIS 53, HTFL 9.6, PV 35, YP 21, 58% OIL, 34% SOL, PH 1310, ALK 5.5, LM 7.1, CL 196,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,649,797.
- 9/29/93 7714' Drlg 108'/11 $\frac{1}{2}$  hrs. Drlg, C&C mud. Run equiv mud test 16 ppg to 18.5 ppg, 933 psi. TOOH, change BHA, align motor w/MWD. TIH, break circ. Wash to btm, break in bit. Slide drlg from 7606-7616'. Circ btms up. Slide drlg from 7616-7620'. Drlg from 7620-7683'. Circ btms up. Slide drlg from 7683-7710'. Drlg from 7710-7714'. Avg 4'/hr sliding; 10'/hr rotating. See attached svy report for svys. MW 15.9, VIS 49, HTFL 9.4, PV 31, YP 19, 60% OIL, 33% SOL, PH 1340, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 7, 10" 10, CAKE 2. CC: \$1,705,735.
- 9/30/93 7920' Drlg 206'/22 $\frac{1}{2}$  hrs. Slide drill from 7714-7745'. RS. Slide drill from 7745-7748'. Rotate drill from 7748-7755'. Circ btms up. Slide drill from 7755-7920'. BGG 22, B5 - silt, 100% siltstone. MW 15.9, VIS 48, HTFL 10.8, PV 30, YP 20, 59% OIL, 32% SOL, PH 1360, ALK 5.2, LM 7.0, CL 182,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,726,879.
- 10/1/93 8194' Drlg 274'/23 $\frac{1}{2}$  hrs. Slide drill from 7920-7961'. RS. Slide drill from 7961-8025'. Rotate drill from 8025-8055'. Slide drill from 8055-8100'. Rotate drill from 8100-8105'. Slide drill from 8105-8129'. Rotate drill from 8129'. Mud losses of 5-10 lbs @ 7818', 7873', 7990', 8080'. MW 15.8, VIS 49, HTFL 11.4, PV 37, YP 21, 59% OIL, 32% SOL, PH 1440, ALK 5, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,746,994.
- 10/2/93 8370' MD, 7268' TVD Rotate drill 176'/18 $\frac{1}{2}$  hrs. Slide drill from 8194-8242'. Circ btms up. Short trip 11 stds. Slide drill from 8242-8256'. Rotate drill from 8256-8266'. Slide drill from 8266-8273'. RS. Rotate drill from 8273-8278'. Slide drill from 8278-8322'. Rotate drill from 8322-8335'. Circ samples, WOO. Rotate drill from 8335-8365'. Circ btms up. Rotate drill from 8365-8370'. BGG 20, SH dk grn - blk carb. MW 15.5, VIS 47, HTFL 12, PV 36, YP 22, 60% OIL, 31% SOL, PH 1440, ALK 4.7, LM 6.1, CL 177,000, CA 87/13, GELS 7-2, 10" 11, CAKE 2. CC: \$1,770,645.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

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- 10/3/93 8469' Drlg 99'/14 hrs. Rotate drill from 8370-8397'. RS. Rotate drill from 8397-8417'. Slide drill from 8417-8421'. Mix and pump pill. TOOH. Shim motor to 1½°; align motor. TIH, fill pipe @ 4091'. W&R 32' to btm. Slide drill from 8421-8425'. Remove and replace blown-up vibrating hose on mud line under sub. Drlg. MW 15.5, VIS 49, HTFL 10.2, PV 35, YP 21, 61% OIL, 32% SOL, PH 1460, ALK 5.3, LM 6.9, CL 191,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: 1,791,039.
- 10/4/93 8534' TIH w/1° PT motor 65'/14 hrs. Slide drill from 8469-8534'. Circ btm up. Pump pill. TOOH, LD 21 jts 5" DP. Change out motor, align same. Check BOPS. TIH, PU 21 jts 4" DP. Fill pipe @ 4850'. MW 15.5, VIS 52, HTFL 10, PV 37, YP 21, 61% OIL, 31% SOL, PH 1440, ALK 5.5, LM 7.1, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,816,328.
- 10/5/93 8683' Rotate drlg 149'/21 hrs. TIH. Slide drlg from 8535-8552'. Rotate drlg from 8552-8557'. RS. Rotate drlg from 8557-8560'. Circ btms up. Rotate drlg from 8560-8588'. Slide drlg from 8642-8650'. Slide drlg from 8650-8659'. Rotate drlg from 8659-8683'. MW 15.5, VIS 50, HTFL 9.8, PV 34, YP 21, 60% OIL, 32% SOL, PH 1460, ALK 5.0, LM 6.5, CL 178,000, CA 87/13, GELS 7, 10" 11, CAKE 2. CC: \$1,835,290.
- 10/6/93 8534' TVD 7263'. Sidetracking and time drlg @ 8534' 56'/19 hrs. Rotate drlg from 8683-8712'. RS. Slide drlg from 8712-8729'. Circ btms up. Pump pill, LD 6 jts DP, short trip to shoe. WOO & circ. Ream from 8524-8529' and start sidetracking. Sidetracking and time drlg from 8524-8534'. MW 15.6, VIS 50, HTFL 9.8, PV 32, YP 21, 59% OIL, 32.1% SOL, PH 1420, ALK 4.8, LM 6.2, CL 182,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,854,175.
- 10/7/93 8641' 7259' TVD. Slide drlg @ 8641' 107'/23½ hrs. Sidetracking drlg from 8534-8556'. RS. Slide drlg from 8556-8641'. Lost 20 bbls in seepage. MW 15.5, VIS 51, HTFL 9.6, PV 34, YP 20, 60% OIL, 32% SOL, PH 1420, ALK 5.2, LM 6.7, CL 196,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,886,128.
- 10/8/93 8800' 7262.78' TVD. Rotate drlg @ 8800' 159'/23½ hrs. Rotate & drlg from 8641-8712'. RS. Rotate & drlg from 8712-8717'. Slide drlg from 8717-8721'. Rotate & drlg from 8721-8729'. Slide drlg from 8729-8752'. Rotate & drlg from 8752-8800'. Lost 28 bbls in seepage. MW 15.5+, VIS 51, HTFL 9.4, PV 35, YP 20, 60% OIL, 31.1% SOL, PH 1420, ALK 5.0, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 11, CAKE 2. CC: \$1,905,952.
- 10/9/93 8935' 7277.63' TVD. Rotate drlg @ 8935' 135'/22½ hrs. Slide drlg from 8800-8836'. Circ btms up for samples. RS and check BOPS. Rotate drlg from 8836-8848'. Slide drlg from 8848-8899'. Rotate drlg from 8899-8935'. Lost 5 bbls in seepage. MW 15.5, VIS 53, HTFL 9.6, PV 35, YP 20, 61% OIL, 31.2% SOL, PH 1460, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: \$1,924,879.
- 10/10/93 9070' 7298.23' TVD. Rotate drlg @ 9070' 135'/20½ hrs. Rotate drlg from 8935-8943'. Slide drlg from 8943-8962'. Pump pill. Short trip 22 stds and 18 stds in orient tool face and finish TIH 4 stds. Rotate drlg from 8962-8992'. RS and check BOPS. Slide drlg from 8992-9054'. Rotate drlg from 9054-9070'. Lost 10 bbls in seepage. MW 15.6, VIS 53, HTFL 9.4, PV 36, YP 20, 59% OIL, 32% SOL, PH 1520, ALK 4.9, LM 6.3, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,949,076.
- 10/11/93 9191' 7319.62' TVD. Slide drlg @ 9191' 121'/24 hrs. Rotate drlg from 9070-9077'. Slide drlg from 9077'. MW 15.5, VIS 54, HTFL 9.4, PV 39, YP 22, 58% OIL, 31.2% SOL, PH 1500, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,968,044.
- 10/12/93 9309' 7355.4' TVD. Slide drlg @ 9309' 118'/24 hrs. Slide drlg from 9191-9390'. MW 15.5, VIS 55, HTFL 9.0, PV 40, YP 22, 58% OIL, 32% SOL, PH 1495, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,996,128.

# CHRONOLOGICAL REPORT

**COMPLETION:**

KANE SPRINGS UNIT #16-1  
 Kane Springs Unit  
 Grand County, UT  
 Parker #233/ACT  
 WI: 48.09% COGC AFE: 14246  
 ATD: 7180' TVD/10,200' PBD: 7470'  
 Csg: 7 5/8" @ 4764'-7600'  
 CWC(M\$): 2,585.0 /CC(M\$): 2,724.4

11/17/93 PO: Flow back frac. Flwd 93 BO, 112 BW/23 hrs on an 8/64" chk, FTP 850 psi.

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
7:00 PM	950	800	8/64"	6'2"	4.2	60%
8:00	950	750	8/64"	6'3"	4.2	60%
9:00	950	750	8/64"	6'4"	4.2	70%
10:00	950	750	8/64"	6'5"	4.2	70%
11:00	900	750	8/64"	6-6 1/2"	6.2	70%
12:00 AM	900	750	8/64"	6'8"	6.3	70%
1:00	850	750	8/64"	6'9"	4.2	80%
2:00	850	750	8/64"	6'10 1/2"	6.3	80%
3:00	850	750	8/64"	7'0"	6.3	60%
4:00	850	750	8/64"	7'1"	4.2	50%
5:00	850	750	8/64"	7'2"	4.2	40%
6:00	850	750	8/64"	7'3"	4.2	40%

54.4 TOTAL

34.8 BO, 19.6 BW  
 DC: \$ 3,530

CC(M\$): 2,719.2

11/18/93 PO: Flw back frac. Flwd 73 BO, 32 BW/24 hrs on 8/64" chk, FTP 650 psi. 592 BLFTR.

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
7:00 PM	700	700	8/64"	8'6"	4.3	70%
8:00	700	700	8/64"	8'7"	4.2	70%
9:00	700	700	8/64"	8'7 1/2"	2.0	70%
10:00	700	700	8/64"	8'8 1/2"	4.3	60%
11:00	700	700	8/64"	8'9 1/2"	4.3	60%
12:00 AM	700	700	8/64"	8'11"	5.9	80%
1:00	700	700	8/64"	9'0"	3.8	80%
2:00	700	700	8/64"	9'1"	3.7	70%
3:00	700	700	8/64"	9'2"	3.6	70%
4:00	700	700	8/64"	9'3"	3.6	70%
5:00	650	675	8/64"	9'4"	3.5	70%
6:00	650	675	8/64"	9'5"	3.3	80%

42.4 TOTAL

30.0 BO, 12.4 BW.  
 Swb/24 hrs (11/17/93):

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
7:00 AM	850	750	8/64"	7'4 1/2"	6.4	40%
8:00	800	750	8/64"	7'6"	6.4	60%
9:00	800	700	8/64"	7'7"	4.2	80%
10:00	800	700	8/64"	7'8 1/2"	6.4	80%
11:00	800	700	8/64"	7'9 1/2"	4.2	80%
12:00 PM	800	700	8/64"	7'11"	6.4	80%
1:00	750	700	8/64"	8'0"	4.2	80%
2:00	750	700	8/64"	8'1"	4.2	60%
3:00	700	700	8/64"	8'2"	4.2	60%
4:00	700	700	8/64"	8'3"	4.2	60%
5:00	700	700	8/64"	8'4"	4.2	70%
6:00	700	700	8/64"	8'5"	4.2	70%
7:00	700	700	8/64"	8'6"	4.3	70%

62.8 TOTAL

43.2 BO, 19.6 BW  
 DC: \$ 2,900

CC(M\$): 2,722.1

11/19/93 PO: Flw back frac. Flwd 37 BO & 9 BW/13 hrs on an 8/64" chk, FTP 600 psi. Flwd 38 BO, 14 BW/11 hrs on 12/64" chk, FTP 300 psi. Total prod 75 BO, 24 BW/24 hrs. 568 BLFTR.

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
7:00 PM	600	650	12/64"	1'10"	3.5	80%
8:00	500	650	12/64"	2'1"	10.5	80%
9:00	500	650	12/64"	2'2"	3.4	80%

# CHRONOLOGICAL REPORT

**COMPLETION:**

Page #4

KANE SPRINGS UNIT #16-1  
 Kane Springs Unit  
 Grand County, UT  
 Parker #233/ACT  
 WI: 48.09% COGC AFE: 14246  
 ATD: 7180' TVD/10,200' PBD: 7470'  
 Csg: 7 7/8" @ 4764'-7600'  
 CWC(M\$): 2,585.0 /CC(M\$): 2,726.6

11/19/93

(cont...)

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
10:00 PM	450	650	12/64"	2'3"	3.5	80%
11:00	400	650	12/64"	2'5"	7.0	80%
12:00 AM	300	650	12/64"	2'6"	3.4	80%
1:00	325	650	12/64"	2'7"	3.5	80%
2:00	300	600	12/64"	2'8"	3.5	70%
3:00	325	640	12/64"	2'9"	3.5	60%
4:00	325	650	12/64"	2'11"	6.9	60%
5:00	325	650	12/64"	3'0"	3.5	60%
6:00	300	650	12/64"	3'1"	3.5	60%

52.2 Total

37.9 BO, 14.3 BW. Swab Report:

TIME	FTP	CP	CHOKE	TANK	FLWD	OIL%
7:00 AM	650	700	8/64"	9'6"	3.3	80%
8:00	650	675	8/64"	9'8"	6.3	80%
9:00	650	675	8/64"	9'9"	3.0	80%
10:00	650	675	8/64"	9'10"	3.1	80%
11:00	650	675	8/64"	9'11"	3.1	SI 20 min
12:00 PM	700	650	8/64"	1'3"	3.5	New tank
1:00	650	650	8/64"	1'4"	3.5	80%
2:00	600	650	8/64"	1'5"	3.5	80%
3:00	625	650	8/64"	1'6"	3.5	80%
4:00	600	650	8/64"	1'7"	3.5	80%
5:00	600	650	8/64"	1'8"	3.5	80%
6:00	600	650	8/64"	1'9"	3.5	80%
7:00	600	650	8/64"	1'10"	3.5	80%

46.8 TOTAL

37.4 BO, 9.4 BW/13 hrs.

DC: \$ 2,250

CC(M\$): 2,724.4

11/20/93

PO: Flow back frac. Flwd 65 BO, 16 BW/24 hrs, FTP 150-300 psi on a 12/64" chk. 552 BLFTR.

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
7:00 PM	300	600	12/64"	4'2"	4.0	80%
8:00	200	600	12/64"	4'2 1/2"	2.0	80%
9:00	250	600	12/64"	4'3"	2.0	80%
10:00	200	600	12/64"	4'4"	2.0	80%
11:00	200	600	12/64"	4'4 1/2"	2.0	70%
12:00 AM	200	600	12/64"	4'5 1/2"	4.0	80%
1:00	150	600	12/64"	4'6"	2.0	90%
2:00	150	600	12/64"	4'7"	4.0	90%
3:00	225	600	12/64"	4'8"	4.0	90%
4:00	200	600	12/64"	4'9"	4.0	80%
5:00	200	600	12/64"	4'9 1/2"	2.0	80%
6:00	300	600	12/64"	4'10 1/2"	4.0	80%

34.0 TOTAL

27.8 BO, 6.2 BW. Swb Rpt:

TIME	FTP	CP	CHOKE	TANK	FLWD	OIL%
7:00 AM	300	675	12/64"	3'2"	3.5	70%
8:00	300	650	12/64"	3'3"	3.5	80%
9:00	300	650	12/64"	3'4"	3.5	80%
10:00	200	650	12/64"	3'5"	3.5	80%
11:00	300	650	12/64"	3'5"	4.6	80%
12:00 PM	250	650	12/64"	3'6 1/2"	3.5	80%
1:00	250	600	12/64"	3'7 1/2"	1.75	80%
2:00	300	600	12/64"	3'9"	3.5	80%
3:00	200	600	12/64"	3'10"	3.5	80%
4:00	300	600	12/64"	3'11"	4.0	80%
5:00	300	600	12/64"	4'0"	4.0	80%

# CHRONOLOGICAL REPORT

**COMPLETION:**

KANE SPRINGS UNIT #16-1  
 Kane Springs Unit  
 Grand County, UT  
 Parker #233/ACT  
 WI: 48.09% COGC                      AFE: 14246  
 ATD: 7180' TVD/10,200'              PBSD: 7470'  
 Csg: 7 7/8" @ 4764'-7600'  
 CWC(M\$): 2,585.0 /CC(M\$): 2,731.0

11/20/93                      (CONT..)

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>FLWD</u>	<u>OIL%</u>
6:00	300	600	12/64"	4'1"	4.0	80%
7:00	300	600	12/64"	4'2"	4.0	80%
					46.85	TOTAL

37.1 BO, 9.7 BW.  
 DC: \$ 2,250

CC(M\$): 2,726.6

11/21/93

PO: Flw back frac. Flwd 61 BO, 9 BW/24 hrs, FTP 100-250 psi on a 12/64" chk. 543 BLFTR.

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>BF</u>	<u>OIL%</u>
7:00 PM	200	600	12/64"	5'9"	4.0	90%
8:00	150	600	12/64"	4'9 1/2"	2.0	90%
9:00	100	600	12/64"	5'10"	2.0	80%
10:00	100	600	12/64"	5'10 1/2"	2.0	90%
11:00	225	600	12/64"	5'11 1/2"	4.0	90%
12:00 AM	200	600	12/64"	6'0"	2.0	70%
1:00	150	575	12/64"	6' 1/2"	2.0	80%
2:00	100	575	12/64"	6'1"	2.0	80%
3:00	200	600	12/64"	6'2"	4.0	70%
4:00	250	600	12/64"	6'3"	4.0	80%
5:00	200	600	12/64"	6'3 1/2"	2.0	80%
6:00	100	600	12/64"	6'4"	2.0	90%
					28.0	TOTAL

22.9 BO, 5.1 BW. Swb Rpt:

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>FLWD</u>	<u>OIL%</u>
7:00 AM	200	600	12/64"	4'11"	2.0	90%
8:00	200	600	12/64"	5'0"	4.0	90%
9:00	250	600	12/64"	5'1"	4.0	90%
10:00	250	600	12/64"	5'2"	4.0	90%
11:00	150	600	12/64"	5'2 1/2"	2.0	90%
12:00 PM	200	600	12/64"	5'3"	2.0	90%
1:00	300	600	12/64"	5'4"	4.0	90%
2:00	250	600	12/64"	5'4 1/2"	2.0	90%
3:00	150	600	12/64"	5'5"	2.0	90%
4:00	250	600	12/64"	5'6"	4.0	90%
5:00	200	600	12/64"	5'7"	4.0	90%
6:00	200	600	12/64"	5'8"	4.0	90%
7:00	200	600	12/64"	5'9"	4.0	90%
					42.0	TOTAL

37.8 BO, 4.2 BW.  
 DC: \$ 2,195

CC(M\$): 2,728.8

11/22/93

PO: Flw back frac. Flwd 60 BO, 10 BW/24 hrs, FTP 100-300 psi on a 12/64" chk. 533 BLFTR.

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>BF</u>	<u>OIL%</u>
7:00 PM	150	575	12/64"	7'2"	4.0	90%
8:00	250	600	12/64"	7'3"	2.0	90%
9:00	200	575	12/64"	7'3 1/2"	2.0	80%
10:00	200	575	12/64"	7'4"	2.0	90%
11:00	200	575	12/64"	7'4 1/2"	4.0	90%
12:00 AM	250	575	12/64"	7'5"	2.0	70%
1:00	200	575	12/64"	7'5 1/2"	2.0	80%
2:00	225	575	12/64"	7'6"	2.0	80%
3:00	250	575	12/64"	7'7"	4.0	70%
4:00	250	575	12/64"	7'8"	4.0	80%
5:00	225	575	12/64"	7'9"	2.0	80%
6:00	225	575	12/64"	6'9 1/2"	2.0	90%
					30.0	TOTAL

23.7 BO, 6.3 BW.

# CHRONOLOGICAL REPORT

**COMPLETION:**

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KANE SPRINGS UNIT #16-1  
 Kane Springs Unit  
 Grand County, UT  
 Parker #233/ACT  
 WI: 48.09% COGC AFE: 14246  
 ATD: 7180' TVD/10,200' PBD: 7470'  
 Csg: 7% @ 4764'-7600'  
 CWC(M\$): 2,585.0 /CC(M\$):

11/22/93 (Cont...) Swb Rpt:

TIME	FTP	CP	CHOKE	TANK	FLWD	OIL%
7:00 AM	300	600	12/64"	6'5"	4.0	90%
8:00	200	600	12/64"	6'6"	4.0	90%
9:00	150	600	12/64"	6'7"	4.0	90%
10:00	250	600	12/64"	6'8"	4.0	90%
11:00	100	600	12/64"	6'8½"	2.0	90%
12:00 PM	200	600	12/64"	6'9"	2.0	90%
1:00	150	600	12/64"	6'9½"	2.0	90%
2:00	300	600	12/64"	6'10½"	2.0	90%
3:00	100	575	12/64"	6'11"	2.0	90%
4:00	250	575	12/64"	6'11½"	2.0	90%
5:00	150	575	12/64"	7'½"	4.0	90%
6:00	250	575	12/64"	7'1½"	4.0	90%
7:00	150	575	12/64"	7'2"	2.0	90%

40.0 TOTAL

36 BO, 4 BW.  
 DC: \$2.195

CC(M\$): 2,731.0

11/23/93

PO: Flw tstg well. Flwd 54 BO, 8 BW/24 hrs, FTP 100-250 psi on 12/64" chk. 525 BLFTR.

TIME	FTP	CP	CHOKE	TANK	BF	OIL%
7:00 PM	175	550	12/64"	8'5½"	2.0	90%
8:00	200	550	12/64"	8'6½"	4.0	90%
9:00	175	575	12/64"	8'7"	2.0	80%
10:00	175	550	12/64"	8'7½"	2.0	80%
11:00	200	550	12/64"	8'8"	2.0	80%
12:00 AM	250	550	12/64"	8'9"	4.0	80%
1:00	225	575	12/64"	8'9½"	2.0	90%
2:00	250	550	12/64"	8'10"	2.0	90%
3:00	200	500	12/64"	7'11"	4.0	80%
4:00	225	525	12/64"	8'11½"	2.0	80%
5:00	200	575	12/64"	9'½"	4.0	80%
6:00	150	550	12/64"	9'1"	2.0	90%

30.0 TOTAL

25.1 BO, 4.9 BW. Swb Rpt:

TIME	FTP	CP	CHOKE	TANK	FLWD	OIL%
7:00 AM	250	575	12/64"	7'10"	2.0	90%
8:00	150	550	12/64"	7'11"	4.0	90%
9:00	250	550	12/64"	7'11½"	2.0	90%
10:00	100	550	12/64"	8'0"	2.0	90%
11:00	225	550	12/64"	8'1"	4.0	90%
12:00 PM	100	550	12/64"	8'1½"	2.0	90%
1:00	200	550	12/64"	8'2"	2.0	90%
2:00	150	550	12/64"	8'2½"	2.0	90%
3:00	225	550	12/64"	8'3"	2.0	90%
4:00	150	550	12/64"	8'4"	4.0	90%
5:00	200	550	12/64"	8'4½"	2.0	90%
6:00	100	550	12/64"	8'5"	2.0	90%
7:00	175	550	12/64"	8'5½"	2.0	90%

32.0 TOTAL

28.8 BO, 3.2 BW.  
 DC: \$ 2,195

CC(M\$): 2,733.2

# CHRONOLOGICAL REPORT

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## COMPLETION:

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT  
Parker #233/ACT  
WI: 48.09% COGC                      AFE: 14246  
ATD: 7180' TVD/10,200'              PBD: 7470'  
Csg: 7% @ 4764'-7600'  
CWC(M\$): 2,585.0 /CC(M\$):

11/24/93

PO: Prep to RIH w/BHP bombs. Flwd 50.6 BO, 6.8 BW/24 hrs, FTP 100-300 psi, 12/64" chk. 518 BLFTR.

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>BF</u>	<u>OIL%</u>
7:00 PM	300	550	12/64"	9'11"	4.2	90%
8:00	200	550	12/64"	9'11 1/2"	1.4	80%
9:00	100	525	12/64"	10'0"	1.4	80%
10:00	150	500	12/64"	10'1"	2.2	90%
11:00	200	550	12/64"	10'2"	2.6	90%
12:00 AM	225	550	12/64"	10'3"	2.5	80%
1:00	150	550	12/64"	10'4"	2.4	80%
2:00	125	525	12/64"	10'5"	2.4	90%
3:00	250	525	12/64"	10'6 1/2"	3.4	90%
4:00	200	550	12/64"	10'7 1/2"	2.1	90%
5:00	150	500	12/64"	10'8"	1.0	80%
6:00	200	525	12/64"	10'9"	2.0	90%
					24.0	TOTAL

20.5 BO, 3.5 BW. Swb Rpt:

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>FLWD</u>	<u>OIL%</u>
7:00 AM	150	550	12/64"	9'2"	3.5	90%
8:00	100	550	12/64"	9'2 1/2"	1.75	90%
9:00	200	550	12/64"	9'3"	1.75	90%
10:00	100	550	12/64"	9'4"	3.5	90%
11:00	200	550	12/64"	9'5"	3.5	90%
12:00 PM	225	550	12/64"	9'6"	3.2	90%
1:00	225	550	12/64"	9'7"	3.1	90%
2:00	100	550	12/64"	9'7 1/2"	1.5	90%
3:00	175	550	12/64"	9'8"	1.5	90%
4:00	225	550	12/64"	9'9"	3.0	90%
5:00	200	550	12/64"	9'9 1/2"	1.45	90%
6:00	200	550	12/64"	9'10"	1.45	90%
7:00	300	550	12/64"	9'10 1/2"	2.0	90%
					33.4	TOTAL

30.1 BO, 3.3 BW.  
DC: \$ 2,700

CC(M\$): 2,735.9

11/25/93

PO: SI f/BHP test. Flwd 15 BO, 2 BW/7 hrs, FTP 75-275 psi, 12/64" chk. RIH w/tandem EMR's, set in SN @ 6,677', bombs on btm @ 11:52AM. SI well @ 1:00 pm 11/24/93.

<u>TIME</u>	<u>FTP</u>	<u>CP</u>	<u>CHOKE</u>	<u>TANK</u>	<u>BF</u>	<u>OIL%</u>
7:00 AM	225	550	12/64"	10'10"	2.0	90%
8:00	175	525	12/64"	10'11 1/2"	2.8	90%
9:00	200	550	12/64"	11' 1/2"	2.6	90%
10:00	0	550	12/64"	11'2"	2.4	90%
11:00	75	525	12/64"	11'2 1/2"	0.8	90%
12:00 PM	225	525	12/64"	11'4"	3.0	90%
1:00	275	525	12/64"	11'7"	3.3	90%

DC: \$7,335

CC(M\$): 2,743.3

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

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- 10/13/93 9002' Sidetrack @ 8987'; now slide drlg @ 9002' 15'/20½ hrs. Slide drlg 9309-9315'. Rot drlg 9315-9351'. RS, work BOPS. Pump pill for sidetrack @ 8987'. POOH 11 jts to 8987'. Ream for sidetrack 8987-8992'. Time drlg @ 6" HR 8987-8990' slide. Time drlg @ 1' HR 8990-9000' slide. Time drlg @ 2' HR 9000-9002' slide. B-5 silt/B-4 SH (contact), BGG 5, CG 0, TG 0. MW 15.5, VIS 52, HTFL 9.0, PV 37, YP 21, 58% OIL, 32% SOL, PH 1580, ALK 5.5, LM 7.1, CL 168,000, CA 84/16, GELS 7, 10" 13, CAKE 2. CC: \$2,016,420.
- 10/14/93 9003' Time drlg (slide) for sidetrack @ 9001' 2'/3½ hrs. Sidetrack drlg from 9002-9008' @ 2 FPH. Sidetrack drlg from 9008-9018' @ 3 FPH, could not get sidetracked. RS, work BOPS. C&C, build slug. Pump pill & TOOH. Change out motor from 1° to 1½°; align same. Install MWD tool. TIH to 4747', fill pipe. Cut drlg line. TIH to 8500'. Orient tool face. TIH, tag bridge @ 8625'. W&R 8625-8670'. Finish TIH to 8996'. Orient tool face and ream from 8996-8670'. Time drlg (slide) for sidetrack @ 9001'. BGG 4-6, CG 0, TG @ 9018' 22. MW 15.6+, VIS 55, HTFL 9.2, PV 38, YP 23, 57% OIL, 33% SOL, PH 1610, ALK 5.0, LM 6.5, CL 165,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,052,375.
- 10/15/93 9011' Prep to screw onto fish 8'/11½ hrs. Slide drlg for sidetrack from 9003-9009' @ 6"-1'/hr. RS. Slide drlg for sidetrack from 9009-9011' @ 1'/hr. Lost 800 psi, circ mix pill and slug pipe. TOOH, change out jars and MWD tool. Left bit and btm 4' of mud motor and 10.7' of rotor in hole. PU MWD and align same w/mud motor pulled; will attempt to screw back onto fish. TIH, fill pipe @ 4700'. Install rot head, prep to try and screw onto fish. MW 15.6, VIS 51, HTFL 8.8, PV 34, YP 20, 57% OIL, 33% SOL, PH 1680, ALK 4.8, LM 6.2, CL 162,000, CA 84/16, GELS 7, 10" 12, CAKE 2. CC: \$2,072,887.
- 10/16/93 9011' TIH w/1½° bit and motor to finish sidetrack. Attempt to screw back onto fish. TOOH — no rec. PU overshot and make up fishing tools. RS, work BOPS. TIH w/fishing tools. LD 3 jts 4" DP; PU 3 jts 4" DP. Fish for bit and motor part. TOOH — rec all of fish, LD same. PU BHA #20, motor and MWD. Align motor and MWD. PU kelly and test ok. TIH w/1½° bit and motor. MW 15.9, VIS 58, HTFL 8.8, PV 40, YP 26, 57% OIL, 34% SOL, PH 1520, ALK 4.8, LM 6.2, CL 160,000, CA 85/15, GELS 9, 10" 18, CAKE 2. CC: \$2,105,568.
- 10/17/93 9019' POOH w/fish (bit, lower section of mud motor and rotor) 8'/5½ hrs. Finish TIH w/bit, 1½° mud motor and BHA. Time drlg for sidetrack; slide from 9011-9019'. RS, work BOPS. Lost 700 psi; attempt to screw back @ separation. Pump slug and POOH left btm 3' of mud motor, bit and rotor in hole. WO fishing tools. Make up fishing tools — overshot w/¾" basket grapple. TIH w/same. Engage fish @ 9016'. Build slug; pump pill and POOH w/fish. MW 15.8, VIS 63, HTFL 8.8, PV 42, YP 26, 58% OIL, 32% SOL, PH 1600, ALK 4.5, LM 5.8, CL 165,000, CA 84/16, GELS 8, 10" 19, CAKE 2. CC: \$2,125,934.
- 10/18/93 9024' Changing out mud motor and stabilizer; thread (lock stabilizer) 5'/2½ hrs. Finish POOH — rec all of fish. LD fish; break down and lay out fishing tools. RS, check BOPS. PU motor and align MWD; test ok. TIH, PU 12 jts 4" SHDP. Circ and work pipe to clean up any junk on btm. Slide drlg from 9019-9024'. MWD started acting up. Mix and pump pill. POOH, stabilizer on motor had backed half way off, causing bearings to fall; motor locked up. Change out MWD and check bit — ok. Change out mud motor and stabilizer — thread (lock stabilizer). MW 15.9, VIS 57, HTFL 9.0, PV 40, YP 23, 56% OIL, 33% SOL, PH 1580, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 8, 10" 15, CAKE 2. CC: \$2,148,896.
- 10/19/93 9086' TOOH to find PSI loss 62'/12 hrs. Align mud motor with MWD and test — ok. TIH, RS. TIH to 8917', fill pipe @ 5200'. W&R 8917-9024'. Slide drlg 9024-9030'. Rot drlg 9030-9035'. Slide drlg 9035-9064'. Rot drlg 9064-9086'. PU to make conn; lost 800 psi, slack off and touch btm 10' high. Circ and clean hole while building pill. Pump pill. TOOH to find PSI loss. B-4 silt, BGG 16, CG 0, TG @ 9024' 17. MW 15.9, VIS 56, HTFL 9.0, PV 38, YP 24, 55.5% OIL, 33.5% SOL, PH 1600, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 7, 10" 14, CAKE 2. CC: \$2,181,398.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

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- 10/20/93 9086' WO spear to fish 5 3/4" OD, WP ext and OS. TOOH for press loss. Motor backed off @ shim connection. RS, work pipe and blind rams. Cut drlg line. WO fishing tools. PU 6 1/8" OS w/5" grapple, 5 3/4" WP ext, bumper sub jars and TIH. Tag obstruction @ 9013'. Circ & work OS to top fish @ 9084', work fish. Mix and pump pill. TOOH, left 5 3/4" OD WP ext & 6 1/8" OS in hole. Backed off WP, top sub & 4' ext. 17.43' OS & WP left in hole. Have 6' to spear into. WO spear. MW 16.4, VIS 63, HTFL 8.6, PV 43, YP 24, 55% OIL, 34.3% SOL, PH 1560, ALK 3.8, LM 4.9, CL 125,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,201,591.
- 10/21/93 8900' MD, 7272' TVD Sidetrack #4, time drlg 6"/hr 3'/7 hrs. WOO. RS. WOO. PU bit, 1.4° D475 Drilex motor, align motor w/MWD. TIH to 4700'. Fill pipe, orient and test tools. TIH. Ream and start sidetracking. Slide time drill @ 6"/hr. Cane Creek B-4 Silt, 100% siltstone, BGG 15, TG 32. MW 16, VIS 60, HTFL 9.6, PV 41, YP 21, 57% OIL, 33.1% SOL, PH 1520, ALK 3.9, LM 5, CL 159,000, CA 85/15, GELS 8, 10" 13, CAKE 2. CC: \$2,259,324.
- 10/22/93 8912' TIH 12'/14 1/2 hrs. Time drill. RS. Time drill to 8912'. PU, check sidetrack. Motor stalling; could not get started again. Mix and pump pill. TOOH, change out Drilex motor. PU 1.3° D475 Drilex motor. TIH, orient motor and MWD, TIH. Cane Creek B-4 Silt, 50% siltstone, 50% SH, BGG 8-12. MW 15.5, VIS 51, HTFL 9.4, PV 36, YP 20, 58% OIL, 31.1% SOL, PH 1400, ALK 52, LM 6.73, CL 170,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,287,202.
- 10/23/93 8924', 7276.46' TVD Drlg 12'/12 hrs. TIH. Orient motor, W&R 24' to btm. Time drlg, mud motor stalling. Pump pill. TOOH, LD Drilex motor. PU PT, 1 1/4° motor, align w/MWD, test motor. TIH, fill DP, orient tool. TIH, time drlg 8912-8924' @ 8918', motor stalling as if in frac or formation change. B-4 Silt/B-4 SH contact, 50% siltstone, 50% SH w/anhy and salt fill frac, BGG 12-16, TG 12. MW 15.5, VIS 59, HTFL 10.2, PV 42, YP 19, 56% OIL, 33% SOL, PH 1520, ALK 48, LM 6.2, CL 192,000, CA 82-18, GELS 7, 10" 3, CAKE 2. CC: \$2,318,858.
- 10/24/93 9038', 7302' TVD Rotate drill 114'/13 1/2 hrs. Time drlg from 8929'. RS. Slide drlg from 8929-8970'. Circ btms up. Pump pill. TOOH, change out mud motors, align motor w/MWD, Baker-lock stb on motor. Work BOPS. TIH. Fill pipe @ 4995'. Orient tools. TIH, slide drlg from 8970-8991'. Rotate drill. B-5 Silt/B-5 SH boundary, 100% siltstone, BGG 30-40, TG 20 @ 8970'. MW 15.6, VIS 54, HTFL 10.2, PV 36, YP 20, 58% OIL, 32% SOL, PH 1560, ALK 48, LM 62, CL 150,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,341,609.
- 10/25/93 9272', 7366' TVD Drlg 234'/23 1/2 hrs. Rotate drill 9038-9054'. Slide drill 9054-9084'. RS, Rotate drill 9084-9194'. Slide drill 9194-9249'. Rotate drill 9249-9272'. Lost approx 16 bbls mud to seepage last 24 hrs. MW 15.5, VIS 52, HTFL 9.6, PV 35, YP 19, 58% OIL, 32% SOL, PH 1440, ALK 52, LM 6.7, CL 142,000, CA 84-16, GELS 7, 10" 11, CAKE 2. CC: \$2,361,319.
- 10/26/93 9332' TIH 60'/11 hrs. Rotate drill from 9272-9283'. Slide drill from 9283-9301'. RS. Slide drill from 9301-9328'. Rotate drill from 9328-9332'. Lost pump press after conn @ 9332', 200 PSI @ 108 SPM to 2400 PSI @ 110 SPM, set back down on btm w/10,000#. Turn to right; got press increase. Mix and pump pill. TOOH, LD motor. PU new motor, weld straps on conn of new motor and Baker-lock rest of conn, orient motor w/MWD, TIH. Lost approx 19 bbls mud to seepage last 24 hrs. MW 15.5, VIS 55, HTFL 9.4, PV 37, YP 21, 58% OIL, 32% SOL, PH 1540, ALK 5.1, LM 6.6, CL 133,000, CA 84-16, GELS 8, 10" 13, CAKE 2. CC: \$2,384,750.
- 10/27/93 9424' TIH w/setting tool and retainer to 7479.61' 92'/6 1/2 hrs. TIH w/motor, MWD, and bit. Fill DP and orient motor @ 8525'. Install rot head and TIH. Rotate drlg from 9332-9394'. RS. Rotate drlg from 9394-9406'. Slide drlg from 9406-9424'. Pump pill and TOOH 19 stds. C&C. TOOH and SLM out, LD 2 jts & HW DP and jars. LD motor, 2 knobby monell and MWD monell and all XO. PU setting tool and retainer and TIH w/DP to 7479.61'. MW 16.0, VIS 65, HTFL 9.6, PV 42, YP 21, 57% OIL, 34% SOL, PH 1500, ALK 5.2, LM 6.7, CL 159,000, CA 85-15, GELS 8, 10" 14, CAKE 2. CC: \$2,408,023.

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 10

10/28/93 9424' Press testing BOPS. WOO. Set retainer @ 7563'. RU Halliburton, test csg and retainer 500 psi - ok and DP 1000 psi - ok. Injection rate 1½ bbls min, 2600 psi cmt w/125 sx prem H w/.1% HR-4, 100 sx below retained and 75 sx on top. LD 3 jts DP. Reverse out, no cmt and RD Halliburton. RU LD mech, LDDP and break kelly and LD 4" HWDP. Change out lower pipe rams. LD Homco tools and load out 4" DP and 4" HWDP. WO 27/8" tbg. Press testing BOPS. MW 16.3, VIS 68, HTFL 9.8, PV 44, YP 22, 54% OIL, 35% SOL, PH 1560, ALK 5.1, LM 6.6, CL 142,000, CA 82-18, GELS 8, 10" 13, CAKE 2. CC: \$2,438,670. FINAL DRILLING REPORT.

OPERATOR CRISTAL OIL & GAS  
 ADDRESS P.O. Box 749  
DENVER COLORADO 80201-0749

OPERATOR ACCT. NO. N 0230

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE	
					QQ	SC	TP	RG	COUNTY			
B	99999	11484	43-019-31341	KANE SPRINGS UNIT 16-1	SE	SW	10	255	18E	GRAND	7-24-93	7-24-93
WELL 1 COMMENTS: IF COMMERCIAL, WELL WILL BE OPERATED BY COLUMBIA OIL & GAS AFTER WELL 15 COMPLETED												
WELL 2 COMMENTS:												
WELL 3 COMMENTS:												
WELL 4 COMMENTS:												
WELL 5 COMMENTS:												

- ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

RECEIVED

SEP 02 1993

DIVISION OF  
 OIL, GAS & MINING

Redd Sh. Pitt  
 Signature  
Operator  
 Title  
Sept 8-30-93  
 Date

Phone No. (303) 573-4455

**COLUMBIA GAS**  
Development



**VIA AIRBORNE EXPRESS**

February 9, 1994

Bureau of Land Management  
Attn: Eric Jones  
82 E. Dogwood  
Moab, UT 84532

State of Utah  
Division of Oil, Gas & Mining  
Attn: Mr. R. J. Firth  
355 W. N. Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180

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FEB 10 1994

DIVISION OF  
OIL GAS & MINING

**Reference: Kane Springs Unit #16-1  
Sec.16-T25S-R18E  
Grand County, Utah**

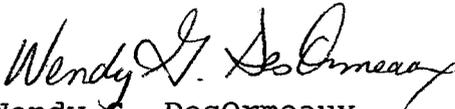
Gentlemen:

Please find attached a Sundry Notice requesting a change in operatorship for the above-referenced well effective February 10, 1994.

Should you have any questions or require additional information, please contact me at 713/871-3400.

Very truly yours,

COLUMBIA GAS DEVELOPMENT CORPORATION

  
Wendy G. DesOrmeaux  
Regulatory Coordinator

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

5. Lease Designation and Serial No.  
ML-44333

6. If Indian, Allottee or Tribe Name  
N/A

**SUBMIT IN TRIPLICATE**

7. If Unit or CA, Agreement Designation

1. Type of Well

Oil Well  Gas Well  Other

Kane Springs Fed. Uni.

2. Name of Operator

Columbia Gas Development Corporation

8. Well Name and No.

Kane Springs Unit 16-

3. Address and Telephone No.

P. O. Box 1350, Houston, TX 77251-1350

9. API Well No.

43-019-31341

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

960' FSL & 1960' FWL, SE/SW Sec.16-T25S-R18E

10. Field and Pool, or Exploratory Area

Wildcat

11. County or Parish, State

Grand County, Utah

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>Change operator</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Columbia Gas Development Corporation respectfully requests a change in operatorship of the above-referenced well from Coastal Oil & Gas Corporation to Columbia Gas Development Corporation effective February 10, 1994.

**RECEIVED**

FEB 10 1994

DIVISION OF  
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed

*Wendy S. DeLooney*

Title

Regulatory Coordinator

Date

2/9/94

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

# Speed Letter®

To Ed Bonner

From Don Staley

State Lands

Oil, Gas and Mining

Subject Operator Change

— No. 9 & 10 FOLD  
MESSAGE

Date 2/16 1994

Ed,

For your information, attached are copies of documents regarding an operator change on a state lease(s). These companies have complied with our requirements. Our records have been updated. Bonding should be reviewed by State Lands ASAP.

Former Operator: COASTAL OIL & GAS (N0230)

New Operator: COLUMBIA GAS DEVELOPMENT (N 5035)

Well:	API:	Entity:	S-T-R:
<u>Kane Springs 16-1</u>	<u>43-019-31341</u>	<u>11484</u>	<u>16-255-18E</u>
			<u>ML 44333</u>

— No. 9 FOLD  
— No. 10 FOLD CC: Operator File

Signed Don Staley

REPLY

Date \_\_\_\_\_ 19\_\_

Signed

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

Routing:

1- <del>ITC</del>
2- <del>DTS</del>
3- <del>VLC</del>
4- <del>RIF</del>
5- <del>LEC</del>
6- <del>RLE</del>

Attach all documentation received by the division regarding this change.  
 Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (well sold)       Designation of Agent  
 Designation of Operator       Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: 2-10-94)

TO (new operator)	<u>COLUMBIA GAS DEVELOPMENT</u>	FROM (former operator)	<u>COASTAL OIL &amp; GAS CORP.</u>
(address)	<u>PO BOX 1350</u>	(address)	<u>PO BOX 749</u>
	<u>HOUSTON TX 77251</u>		<u>DENVER CO 80201-0749</u>
phone	<u>(713) 871-3400</u>	phone	<u>(303) 572-1121</u>
account no.	<u>N 5035</u>	account no.	<u>N0230</u>

Well(s) (attach additional page if needed):      **\*KANE SPRINGS UNIT**

Name:	<u>KANE SPRINGS 16-1/DRL</u>	API:	<u>43-019-31341</u>	Entity:	<u>11484</u>	Sec	<u>16</u>	Twp	<u>25SR</u>	Rng	<u>18E</u>	Lease	Type:	<u>ML44333</u>
Name:	_____	API:	_____	Entity:	_____	Sec	_____	Twp	_____	Rng	_____	Lease	Type:	_____
Name:	_____	API:	_____	Entity:	_____	Sec	_____	Twp	_____	Rng	_____	Lease	Type:	_____
Name:	_____	API:	_____	Entity:	_____	Sec	_____	Twp	_____	Rng	_____	Lease	Type:	_____
Name:	_____	API:	_____	Entity:	_____	Sec	_____	Twp	_____	Rng	_____	Lease	Type:	_____
Name:	_____	API:	_____	Entity:	_____	Sec	_____	Twp	_____	Rng	_____	Lease	Type:	_____

**OPERATOR CHANGE DOCUMENTATION**

- Yes 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form). *(Rec'd 9-2-93 "Entity Action Form")*
- Yes 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form). *(Rec'd 2-10-94)*
- N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) \_\_\_\_\_ If yes, show company file number: \_\_\_\_\_.
- N/A 4. (For Indian and Federal Wells ONLY) The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below. *(See Unit Agreement)*
- Yes 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. *(2-15-94)*
- Yes 6. Cardex file has been updated for each well listed above. *(2-15-94)*
- Yes 7. Well file labels have been updated for each well listed above. *(2-15-94)*
- Yes 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. *(2-15-94)*
- Yes 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

ENTITY REVIEW

- Yes 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) yes (If entity assignments were changed, attach copies of Form 6, Entity Action Form).
- Yes 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only)

- N/A 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.
- Yes
2. A copy of this form has been placed in the new and former operators' bond files.
3. The former operator has requested a release of liability from their bond (yes/no)     . Today's date                      19    . If yes, division response was made by letter dated                      19    .

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

- N/A 1. (Rule R615-2-10) The former operator/lessee of any fee lease well listed above has been notified by letter dated                      19    , of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.
- OK 2. Copies of documents have been sent to State Lands for changes involving State leases.  
2/16/94 memo to Ed Bonner

FILMING

- N/A Cost 1. All attachments to this form have been microfilmed. Date:                      19    .

FILING

- Yes 1. Copies of all attachments to this form have been filed in each well file.
- Yes 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

940215 Bm/s.Y. Unit operator "Columbra Gas Dev."

DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

5. Lease Designation and Serial Number:

ML-44 333

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Kane Springs Fed Unit

8. Well Name and Number:

Kane Springs Unit 16-1

9. API Well Number:

43-019-31341

10. Field and Pool, or Wildcat:

Wildcat

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:

Coastal Oil & Gas Corporation

3. Address and Telephone Number:

P.O. Box 749, Denver, CO 80201-0749

(303) 573-4476

4. Location of Well

Footages: 960' FSL & 1960' FWL

QQ, Sec., T., R., M.: SESW, Section 16-T25S-R18E

County: Grand

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT

(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

SUBSEQUENT REPORT

(Submit Original Form Only)

- Abandonment \*
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other Drill & Complete
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off \*

Date of work completion 11/1/93

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

\* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

See attached chronological history report and directional survey.

13.

Name & Signature:

Title:

Joe Adamski  
Environmental Coord.

Date:

3/9/94

(This space for State use only)

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1

Sec. 16-T25S-R18E

Kane Springs Unit  
Grand County, UT  
Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{1}{8}$ " @ 823'; 10 $\frac{1}{4}$ " @ 4995'  
7 $\frac{7}{8}$ " @ 7600'

DHC(M\$): 2,240.0

- 7/23/93 MIRU, Drilling Service, build rat hole . Drill 30" hole to 67'. Set 20" @ 67' cmt w/7 yds Ready Mix. Drilled hole 7/24/93, 7:00 AM.
- 7/26/93 Dug rat hole and mouse and cellar, 10' X 8'.
- 8/10/93 MI Parker #233 - roading from Altamont, UT. Install liner. Rig moving from Altamont, UT. Trucks were on loc Saturday, Started hauling Sunday, 8/8/93. CC: \$18,638.
- 8/11/93 MIRU. CC: \$18,638.
- 8/12/93 Prep to RURT. MIRT, set matting boards. Level rig pad. Haul in sand and gravel for rig base. CC: \$58,010.
- 8/13/93 RURT. Est spud date Sunday, 8/15/93. CC: \$59,469.
- 8/16/93 139' Drlg 50 $\frac{1}{4}$  hrs. Spud @ 10:00 PM, 8/15/93. RURT. Install rotating head. PU BHA, install blooie line and RU air. Drill, RU air/mist line. Drill, PU 9" collar, 3 PT and change out rotating head rubber. Drill. CC: 102,199.
- 8/17/93 710' Drlg 571 $\frac{1}{2}$  hrs. Remove and install RT rubber. Drlg w/air. RS, drlg w/air, svy. Ream and blow hole. Drlg w/air. Blow hole, hit wtr 2 518', begin airmisting @ 545'. Drlg, blow and clean hole from 518-545'. Drlg, svy, drlg. Svys:  $\frac{1}{2}$ ° @ 266';  $\frac{1}{2}$ ° @ 616'. CC: \$207,199.
- 8/18/93 825' Cut off conductor pipe 115 $\frac{1}{2}$  hrs. Drlg to 825'. Circ & blow hole, finish short trip. Short trip to 3 PT free. Svy. Pump gelled sweep and load hole. TOOH, LD 1-9" DC, 6 PT, SS, 2 3 PT rmrs. RU Csg Tools, RIH w/20 jts 13 $\frac{1}{8}$ " 545# J55 8RD ST&C csg, tally row = 829.21', set @ 823', FC @ 786'. RU Howco, pump 20 bbls fresh wtr. Mix & pump 450 sx HLC Type V cmt w/10# sx CalSeal, 4% gel, 1% CaCl<sub>2</sub> tail w/380 sx Type V w/2% CaCl<sub>2</sub>,  $\frac{1}{4}$ # sx flocele. Disp w/124 BW, bump plug to 800 psi, 500 psi over. Circ 74 bbls cmt to pit. WOC. Cmt in place @ 9:30 PM, 8/17/93. Cut off and cond csg. Witnessed by Glenn Goodwin, State of UT Div of OG&M. Svy:  $\frac{1}{4}$ ° @ 880'. CC: \$248,997.
- 8/19/93 825' NU and test BOPE. Cut off csg. Install csg head and well. Test weld to 750 psi - ok. NU BOPE and chk lines. Fabricate blooie line and modify chk line. Chg out pipe rams from 3 $\frac{1}{2}$ " to 5". Test BOPS, leak between BOP and double stud adapter, 10M flange. ND BOPS to change ring gasket. CC: \$282,293.
- 8/20/93 825' Blow hole dry to drill out. NU and test lower pipe rams. Leaking between double stud adapter and lower pipes. ND BOPS; remove double stud adapter. WO double stud adapter from Oil Field Rental; PU 6 PT, SS, 3 PT, LD 5 8 $\frac{1}{2}$ -9" DC. NU BOPS and test BOPE to 5000 psi, hydril to 2500 psi, csg to 1550 psi. All tests were valid but not witnessed; notified Frank Matthews w/UT State DOGM. Set wear bushing. PU BHA. TIH, tag cmt @ 768'. Blow hole dry. CC: \$317,691.
- 8/21/93 1678' Fill pipe w/wtr, TFNB #3 853 $\frac{1}{2}$  hrs. Drlg cmt, FC, cmt shoe. Dry hole. Drlg w/air. Svy. Drlg w/air. RS. Drlg w/air, hit wtr @ 1470'. Unload hole. Drlg w/air mist. Svy. Drlg. Fill pipe w/wtr. TFNB. Svys:  $\frac{1}{2}$ ° @ 957',  $\frac{1}{4}$ ° @ 1440'. CC: \$330,909.
- 8/22/93 2260' Drlg 582 $\frac{1}{2}$  hrs. TFNB, drlg w/air mist. Reserve pit full. RS. Drlg w/wtr. Trip for string float. Svy. Drlg w/aerated wtr. Svy:  $\frac{3}{4}$ ° @ 1984'. CC: \$354,266.

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 2

- 8/23/93 2925' Drlg 665'/23 hrs. Drlg w/aerated wtr. RS. Svy. Drlg w/wtr and aerated wtr. Svy: 1½° @ 2486'. CC: \$363,963.
- 8/24/93 3375' Drlg 450'/22 hrs. Drlg w/wtr. Svy. Drlg w/aerated wtr. RS. Drlg w/air/aerated wtr. Change out swivel packing. Drlg. Svy: 1° @ 2885'. CC: \$376,866.
- 8/25/93 3667' Drlg w/air and wtr 292'/22 hrs. Drlg w/air and wtr w/750 CFM. RS and check BOPS. WL svy @ 3383'. Change out rot head rubber. Drlg w/air and wtr w/750/2000 CFM. WL svy @ 3647'. Drlg w/air and wtr w/1200 CFM. Svy: 2° @ 3383', 1¼° @ 3647'. Wtr/aerated wtr, MW 8.4, VIS 27. CC: \$391,576.
- 8/26/93 3931' Drlg w/air and wtr 264'/23½ hrs. Drlg w/air and wtr. RS and check BOPS. Drlg w/air and wtr. Wtr, MW 8.4, VIS 27. CC: \$401,734.
- 8/27/93 4185' Drlg w/air and wtr. 254'/16 hrs. Drlg w/air & wtr, load hole w/wtr before trip. Svy: 2° @ 3926'. TFNB. Rls & check BOP's. TIH w/bit & PU six 6¼" DC's & change out jars. Wash 40' to btm, 10' fill. Drlg w/wtr. Unload hole w/air. Drlg w/air & wtr. 1st Ismay approx 4235', Honaker Trail 40% LS, 60% SH, BGG 2, CG 0, TG 0. MW 8.4, VIS 27. CC: \$424,545.
- 8/28/93 4738' Drlg w/air and wtr. 553'/23 hrs. Drlg w/air & wtr. Rls & check BOP's. Drlg w/air & wtr. WL svy: 1½° @ 4495'. Drlg w/air & wtr. Est Paradox Salt #2 @ 4300', Clastic #2 @ 4528', Salt #3 @ 4610', Clastic #3 @ 4680', 40% SH, 30% siltstone, 30% SS, BGG 2, tr CG. MW 9.8, VIS 27. CC: \$443,727.  
Drlg Break      MPF      Gas Units  
4260-4270'      8-3½-5      tr-1200-tr      Gas cut wtr.
- 8/29/93 4995' TIH w/bit & Monel DC. 257'/6½ hrs. Drlg w/air & wtr. Rls & check BOP's. Drlg w/air & wtr. Circ for short trip. Drlg 10'. ST 15 std, 5' fill. C&C for logs. Svy: 1¼° @ 4960'. TOOH for logs & SLM 4997.62'. RU Schlumberger & run DLL-GR-CAL, Sonic from TD to sfc csg & GR to sfc. Logger TD 4999', BHT 136°F, RD logger. Pull wear bushing & LD shock sub & 3 pt reamer. WO Monel DC. TIH w/bit & Monel DC. MW 9.8, VIS 27. CC: \$460,839.
- 8/30/93 4995' ND BOP's & prep to set csg slips. Finish TIH w/bit & Monel DC. Wash 50' to btm, no fill. C&C from csg. TOOH w/bit & run multi-shot svy. RU, LD machine, & 12 - 8¼" DC, Monel DC, reamer. RU T&M csg crew. Run 117 jts 10¼" 60.7# S-95 Hyd-521, equip w/diff shoe & float, and 20 centralizers, total 5010.18'. RU Halliburton & circ csg before cmt. Cmt w/Halliburton, pump 40 bbls Super Flush, 690 sx Silica Light w/.4% gel, 4% CaCl<sub>2</sub>, .3% Halad-413, ¼ pps Flocele, 3 pps Capseal, wt 11.0, yd 2.82 CF/sx, tailed w/1145 sx PPAG Type 5, 10% salt, .6% Halad-322. CC: \$739,100.
- 8/31/93 4995' TIH w/bit. Prep to test csg. PU BOPS and set slips w/275,000#. Cut 10¼" csg. NU head. Test head w/1500 psi. Test backside to 4400 psi. NU BOPS. Test BOPS, valves, lines, manifold, chk, U&L kelly cock to 10,000 psi for 10 min, hydril 2500 psi for 10 min. PU bit, install wear bushing. PU BHA and install drill pipe rubbers. TIH, prep to test csg and disp wtr w/oil mud. MW 14.3, VIS 75, HTFL 3.2, PV 55, YP 30, 73/27% OIL, ALK 4.5, LM 5.8, CL 20M. CC: \$759,236.
- 9/1/93 5069' TOOH for plugged bit 74'/4½ hrs. Test csg w/3000 psi. Drill float, shoe jt and shoe. Drill 4995-5005'. C&C. Tested shoe to 18.5 EMW w/13.9 ppg mud and 1200 psi surf press - ok. Drill 5009-5069'; bit plugged. Slug pipe and POOH. MW 13.8, VIS 68, HTFL 1.8, PV 42, YP 30, 56% OIL, 25% SOL, PH 960, ALK 4.5, LM 5.8, CL 116, CA 74/26, GELS 8, 10" 12, CAKE 1. CC: \$809,948.

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- 9/2/93 5542' Drlg 473'/15½ hrs. POOH - pull wear ring. Finish POOH. Change jets in bit, install wear ring, PU 6 DC's, TIH. Drlg, RS, drlg. Work tight hole @ 5308'. Drlg, circ - WL Svy - mis-run. Drlg, circ - WL Svy, drlg. BG 35, CG 0, TG 31. NOTE: Bit jets plugged w/plastic ties stock @ 5308' twice; pulled loose each time with hit from jars. Svy: 1½° @ 5357'. MW 14.0, VIS 55, HTFL 200 psi 1.8, PV 37, YP 28, 56% OIL, 24.5% SOL, PH 880, ALK 5, LM 6.5, CL 160,000, CA 74/26, GELS 7, 10" 10, CAKE 1. CC: \$838,316.
- 9/3/93 6160' Drlg 618'/22½ hrs. Drlg, RS, drlg, circ - WL svy, drlg. Formation elastic #15, BG 20, CG 2, Svy - none. Lost approx 38 bbls mud due to seepage last 24 hrs. Started nut-plug this AM. Svy: 1½° @ 5840'. MW 145, VIS 50, HTFL 1.6, PV 31, YP 24, 57% OIL, 25% SOL, PH 1040, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 10, CAKE 1. CC: \$863,952.
- 9/4/93 6627' Drlg 467'/18 hrs. Drlg, RS, drlg, work tight hole 6230-6275'. Drlg, circ, WL Svy, drlg - some tight conn w/jars. Circ & pump LCM sweep; spot same behind DC & DP. Short trip 17 stds @ 6527'; no drag - no fill; hole clean. Drlg - control drlg 20 hrs - no problems. Salt #19, BG 12-14, CG 1-2, dn time @ 6277 = 55 min. Short trip 13. Note: Est KOP @ 6711. Svy: ¾° @ 6356'. MW 14, VIS 48, HTFL 10.4, PV 30, YP 23, 57% OIL, 25% SOL, PH 1020, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 9, CAKE 2. CC: \$892,569.
- 9/5/93 6711' RD Schlumberger 84'/5 hrs. Drlg, RS, Drlg to 6711' KOP. C&C, short trip 10 stds; no drag - no fill. C&C for log. Tripping out (SLM) w/multi-shot to csg shoe @ 4995'. Retrieve multi-shot w/WL. Ran gyro thru DP on WL to 900'. Finish TOH (SLM), LD BHA. Change out wear bushing. RU Schlumberger and ran GR, Sonic Caliper log 6714' to surface. WLTD 6714', board 6711', SLM 6715'. RD Schlumberger. Salt #19, BG 12, CG 1-2, short trip 50 @ 6711'. Svy: 2¾° multi-shot @ 6711' S18W. MW 14, VIS 49, HTFL 10.6, PV 30, YP 22, 58% OIL, 25.2% SOL, PH 1000, ALK 5, LM 6.5, CL 196,000, CA 77/23, GELS 7, 10" 9, CAKE 2. CC: \$919,663.
- 9/6/93 6843' Slide drlg 128'/13 hrs. PU directional tools - BHA and HWDP. RD LD mach. TIH, replace bad DP rubbers. Circ & orient motor. Slide drlg 6715-6843', building angle. Clastic #19, BGG 20-30, CG 2-4, TG 63 after logging. Tops: Clastic #19 @ 6818'. Pick up wt 210,000, slack out wt 200,000. MW 14.2, VIS 52, HTFL 10.0, PV 32, YP 22, 58% OIL, 26.3% SOL, PH 990, ALK 5.4, LM 70, CL 187,000, CA 78/22, GELS 6, 10" 8, CAKE 2. CC: \$951,219.
- |                    |            |                  |  |
|--------------------|------------|------------------|--|
| <u>Drlg Breaks</u> | <u>MFP</u> | <u>Gas Units</u> |  |
| 6824-6828'         | 25-5-14    | 12-100-25        |  |
| 6830-6832'         | 18-5-15    | 25-136-30        |  |
- 9/7/93 6915' Drlg 72'/22½ hrs. Slide drlg 6843-6854', building angle. RS, slide drlg 6854-6858', building angle. Circ out gas 6858', max 9600, mud cut 14.2-12.6. Slide drlg 6858-6915', building angle. Now building md wt 15.3-15.6. Salt #20 @ 6899', BG 4640 w/15.3, CG 9280 @ 6885' w/14.9, FCD .4, pick up wt 210,000, slack out wt 200,000. MW 15.3, VIS 52, HTFL 9.6, PV 38, YP 24, 56% OIL, 30.5% SOL, PH 1060, ALK 6.5, LM 8.4, CL 187,000, CA 80/20, GELS 7, 10" 10, CAKE 2. CC: 9278,936.
- |                    |              |                  |   |
|--------------------|--------------|------------------|---|
| <u>Drlg Breaks</u> | <u>MFP</u>   | <u>Gas Units</u> |   |
| 6842-6848'         | 25-12-20     | 25-70-50         | SH blk sft carb.  |
| 6852-6864'         | 30/18-6-8/35 | 45-7000-5120     | SLTST lt gry-gry brn, vfxln sft dol.<br>TVD Clastic #19 = 6812' MD = 6816'. |
- 9/8/93 6966' Install wear bushing. Prep to TIH 51'/3 hrs. Slide drlg from 6917-6966'. C&C mud, raise wt to 16.5. Short trip 5 stds, hole free; short trip BGG 9600 U max. C&C mud, raise wt to 17.0 (mud cut from 16.5 to 14.5 after short trip). Short trip 5 stds, hole free; short trip gas 7360 U. C&C mud; mud, gas cut .3 lb/gal; BGG 2560 U. TOOH, LD 18 jts DP, remove DP rubbers, install wear bushing. Salt #20, 6899'. MW 17°, VIS 56, HTFL 10.4, PV 48, YP 28, 53% OIL, 36.9% SOL, PH 1040, LM 7.25, CL 196,000, CA 85/15, GELS 8, 10" 10, CAKE 2. CC: \$1,010,769.

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- 9/9/93 6966' TIH w/PDC and 2° X 1° directional assembly. Change BHA. Work BOPS. TIH. Could not get thru KOP @ 6715'. Circ out gas. Had intermittent flare of 15'. Orient tools. Slide ream 6709-6799'. Started taking wt, 167' off btm. Bit is in 19-22°/100 build. Circ out gas. TOOH. LD 1° motor. PU 2° X 1° motor to ream w/same assembly which drilled original hole. Cut drill line. Continue TIH hole 100' from KOP @ report time. MW 17.4, VIS 59, HTFL 10.8, PV 46, YP 24, 52% OIL, 37.9% SOL, PH 1080, ALK 5.6, LM 7.3, CL 206,000, CA 84/16, GELS 7, 10" 9, CAKE 2. CC: \$1,032,126.
- 9/10/93 6966' MU BHA #5 and TIH. TIH, W&R from 16,756' to 6802'. C&C mud. TOOH, LD BHA. PU hole opener w/2' bull nose and 6 pt, TIH. Attempt to get in hole w/wtr - no luck. C&C mud. TOOH, LD HO and 6 pt rmr. PU PT 2½° Motor and BHA and TIH. MW 17.5, VIS 64, HTFL 11, PV 49, YP 22, 50% OIL, 38.8% SOL, PH 1110, LM 7.0, CL 196,000, CA 82/18, GELS 7, 10" 10, CAKE 2. CC: \$1,056,242.
- 9/11/93 6832' 6828' TVD. Slide drill w/PDC bit & PT 2°x1° motor 29½/8 hrs. TIH, fill pipe @ 2100' and 5100'. Drlg from 6803-6819'. C&C hole. Pump pill. TOOH, LD motor, work BOPS, PU PT 2°x1° motor, PDC bit. TIH, fill pipe @ 2500' and 5100', orient motor. Slide drill from 6819-6832'. TVD 6827'. MW 17.6, VIS 74, HTFL 10.6, PV 55, YP 21, 52% OIL, 40% SOL, PH 1120, LM 62, CL 215,000, CA 85/15, GELS 7, 10" 10, CAKE 2. CC: \$1,083,471.
- 9/12/93 6911' 6899' TVD. Drlg 79½/24 hrs. Slide drlg sidetrack #1, MW 17.6 in/17.3 out, VIS 61, HTFL 10.6, PV 52, YP 23, 51% OIL, 38.5% SOL, PH 1040, LM 9, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,107,451.
- 9/13/93 7070' 7010' TVD. Drlg 159½/24 hrs. Slide drlg. MW 17.5, VIS 55, HTFL 10.2, PV 512, YP 24, 51% OIL, 39% SOL, 1060 PH, LM 9.3, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,128,155.
- 9/14/93 7125' Slide drill 55½/4½ hrs. Slide drlg to 7094'. Circ btm up, pump pill. TOOH, LD jt 6" DP. Jar out of hole from 6995 (48°) to 6893' (29°). Ream from 6893' to 7094'. Circ, mix and pump pill. TOOH, LD 12 jts 6" DP. Run leak off test to 18.5 equiv at csg shoe, bled off 10 psi in 6 min. PU 1° mud motor, TIH. W&R from 7067' to 7094'. Slide drlg. MW 17.7, VIS 72, HTFL 10, PV 58, YP 28, 51% OIL, 39% SOL, PH 1180, LM 9, CL 215,000, CA 86/14, GELS 8, 10" 12, CAKE 2. CC: \$1,152,510.
- 9/15/93 7257' C&C mud for trip and for motor 132½/6½ hrs. Drlg and rot from 7125-7257'. Pump pill, short trip 12 stds; 4th std tight. TIH 8 stds, hit bridge @ 6839'. Attempt work 1° mud motor thru bridge; hole sticky and tight; C&C. TOOH w/1° motor and LD. PU bit, 3 pt, XO and TIH to 6839'. Begin circ and W&R from 6839-7258'. C&C for short trip; short trip 5 stds - no tight spots. C&C mud. MW 17.8, VIS 61, HTFL 10.6, PV 58, YP 26, 51.5% OIL, 42% SOL, PH 1760, LM 9.0, CL 215,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,180,010.
- 9/16/93 7327' TIH w/1½° motor & MWD 70½/5 hrs. C&C, mix and pump pill. TOOH w/bit for motor. Change out BHA, LD 3 pt & bit, check blind rams and PU mud motor and MWD, change out stab, and align motor w/MWD. TIH w/1° motor and MWD and change out jars. W&R from 7214' to 7257'. Slide drlg from 7257-7289'. Drlg & rot from 7289-7327'. Circ btm up from top Kane Creek and mix pill and pump. TOOH for 1½° motor or change. Check blind rams and change motor and LD stab and align motor w/MWD. TIH w/1½° motor and MWD and fill DP @ 2500' and 5100'. MW 17.6, VIS 55, HTFL 10.2, PV 51, YP 23, 53% OIL, 38% SOL, PH 1320, LM 9.0, CL 215,000, CA 85/15, GELS 8, 10" 11, CAKE 2. CC: \$1,207,860.
- 9/17/93 7374' Slide drlg 47½/23 hrs. Slide drlg from 7327-7361'. Change hose, quick conn on std pipe, finish drlg recorder and visulogger. Slide drlg from 7361-7374'. MW 17.4, VIS 52, HTFL 11.0, PV 51, YP 20, 53% OIL, 38% SOL, PH 1450, LM 7.8, CL 200,000, CA 84/16, GELS 7, 10" 9, CAKE 2, ECD 17.9 lb/bbl. CC: \$1,230,743.

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- 9/18/93 7375' W&R to btm @ 7350' 1 1/4 hrs. Slide drlg from 7374-7375'. C&C, mix and pump pill. TOOH w/motor and bit — stuck @ 7321' and jar out of hole to 7118'. Finish TOOH w/motor and bit. Drag from 7118' to 7024' w/25,000 psi. LD motor and sperry sun, tool. PU 3 pt and 6 pt and TIH w/bit to shoe. Cut drlg line. Finish TIH w/bit to 7181'. W&R from 7181' to 7375'. Lost 10 bbls in seepage. MW 17.3, VIS 62, HTFL 11.6, PV 53, YP 28, 52% OIL, 36.8% SOL, PH 1460, LM 7.8, CL 200,000, CA 83/17, GELS 10, 10" 13, CAKE 2. CC: \$1,250,500.
- 9/19/93 7399' Slide drlg 24'/13 hrs. C&C, mix and pump pill. TOOH w/3 pt, 6 pt and bit. LD rmr, PU new motor and change bend, align w/MWD and make up MWD. TIH w/bit and motor. Begin circ and orient tool. Slide drlg from 7375-7399'. MW 17.4, VIS 59, HTFL 12.8, PV 52, YP 26, 53% OIL, 39% SOL, PH 1380, ALK 5.0, LM 6.5, CL 203,000, CA 85/15, GELS 7, 10" 12, CAKE 2. CC: \$1,278,367.
- 9/20/93 7413' Slide drlg @ 7413' 14'/11 1/2 hrs. Slide drlg from 7399-7408'. RS and check BOPS. Pump pill and TOOH w/bit and motor. Change bit, check blind rams. TIH w/bit and motor to 5070'. Fill pipe and check motor and MWD. TIH w/bit and motor to 6946'; hit bridge, attempt to turn motor — wouldn't go. W&R from 6946-7408'. Ream hard from 6946-7033' — still wouldn't go without pump. Slide drlg from 7408-7413'. MW 17.5, VIS 62, HTFL 11.2, PV 52, YP 28, 54% OIL, 39% SOL, PH 1400, ALK 5.0, LM 6.5, CL 200,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,330,876.
- 9/21/93 7433' Slide drlg @ 7433' 20'/8 1/2 hrs. Slide drlg from 7413-7423'. Circ, mix and pump pill. TOOH for 1° motor. Align MWD, change degree on motor and PU stab. Open blind rams and RS. TIH w/1° motor and bit; slips slipping in DP. WO DP slips from Vernal. TIH to 5074'. Fill pipe and check MWD and motor. TIH w/bit and motor, hit bridge @ 6839', orient motor and fall thru. Slide drlg from 7423-7433'. MW 17.6, VIS 58, HTFL 11.6, PV 50, YP 21, 57% OIL, 36.3% SOL, PH 1480, ALK 5.5, LM 7.1, CL 200,000, CA 89/11, GELS 7, 10" 10, CAKE 2, ECD .4 lb/bbl. CC: \$1,351,041.
- 9/22/93 7530' Slide drlg 97'/23 1/2 hrs. Slide drlg from 7433-7445'. RS. Slide drlg from 7445-7450'. Rotate drlg from 7450-7528'. Slide drlg from 7528-7530'. Cane Creek, BGG 1500/1600, CG 3080/7509, no shows. String wts: pickup 210,000#, slack-off 185,000#, rotating 195,000#; torque 115 amps. MW 17.4, VIS 54, HTFL 12.0, PV 48, YP 22, 57% OIL, 37% SOL, PH 1500, ALK 6.0, LM 7.8, CL 220,000, CA 89/11, GELS 8, 10" 13, CAKE 2. Projected Svy @ 7530': inclination 82°, direction 335.3°, TWD 7168.18', vertical section 474.42', coordinates 423.00°N 214.82°W, DLS 1.40°/100'. CC: \$1,380,688.
- 9/23/93 7581' Slide drlg 51'/23 1/2 hrs. Slide drlg 7530-7540'. RS. Slide drlg 7540-7581'. Cane Creek BG 1400/1600, CG 2320/7571, down time pump 1920/7565, PU 210,000, SO 185,000. NOTE: Aniline point of diesel is 152°. MW 17.5, VIS 55, HTFL 11.4, PV 50, YP 28, 55% OIL, 39% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 89/11, GELS 7, 10" 12, CAKE 2. See attached svy report for svys. CC: \$1,401,334.
- 9/24/93 7,603' C&C for short trip 22'/9 hrs. Slide drlg 7581-7586'. Rotate drlg 7586-7603'. Mix and pump slug. POOH. LD BHA and tools. PU new BHA, TIH to 7323'. W&R 7323-7603. C&C for short trip. A-5 Anydrite @ 7592' MP, BG 1040, CG @ 7571' - 2320, down time 2240, trip 8800' behind gas buster w/20' intermitted flare. NOTE: did not touch anything, TIH to 7323'; #1 pump down. See attached svy report for svys. MW 17.6, VIS 59, HTFL 11.6, PV 55, YP 26, 53% OIL, 40% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,421,921.
- 9/25/93 7603' TIH w/7 7/8" liner @ 6000'. Short trip 11 stds - ok. C&C for csg. Short trip - ok. C&C for csg. Mix and pump slug - drop rabbit. POOH SLM, DL BHA. RU csg crew. PU and ran 7 7/8" liner, 62 jts 39# S-95 Hydril 521 and liner hanger w/pkr. RD csg tools. TIH w/liner, SLM; fill every 9 stds. Shoe now @ 6000'. MW 17.6, VIS 59, HTFL 11.7, PV 58, YP 23, 54% OIL, 40% SOL, PH 1600, ALK 5.5, LM 7.1, CL 190,000, CA 88/12, GELS 8, 10" 15, CAKE 2. CC: \$1,499,343.

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- 9/26/93 7603' Rig repair - #1 pump. Finish TIH w/7 $\frac{7}{8}$ " liner. RU Howco. Circ out gas. Hang liner and cmt by Howco w/30 bbk SAM-4 spacer @ 18#, 175 sx poz scavenger @ 14#, 470 sx Premium AG-250 w/40# Hidense and .5% Halad 322 @ 19# and .2% CBL. Disp w/20 bbls SAM-4 spacer and 170 bbls invert mud @ 17.6#. Bump plug w/1400 psi @ 11:46 AM, 9/25/93. Float held ok; had good circ thru job. Reversed out 8 bbls cmt and 30 bbls scavenger. Set pkr, PU and circ (reverse), press test pkr to 1000 psi - ok. RD Howco. TOOH 37 stds; TIH w/HWDP. RU LD mach and LD HWDP and excess DP. MW 17.7, VIS 62, HTFL 10.6, PV 59, YP 27, 55% OIL, 40% SOL, PH 1530, ALK 5.0, LM 6.5, CL 190,000, CA 90/10, GELS 9, 10" 15, CAKE 2. CC: \$1,608,126.
- 9/27/93 7603' TIH w/6 $\frac{1}{2}$ " bit to clean out liner. Change out pump #1. Change top set of pipe rams to variable. Test BOPS's and manifold variable rams on 4" and 5" DP to 10,000 psi, Hydril on 4" and 5" to 2500 psi, upper and lower kelly valves and relayed equipment to 10,000 psi. Change out tongs and RU floor to run 4" DP. PU BHA and SLM, TIH. MW 17.7, VIS 69, HTFL 10.8, PV 57, YP 27, 55% OIL, 40% SOL, PH 1500, ALK 5.0, LM 5.6, CL 190,000, CA 90/10, GELS 8, 10" 14, CAKE 2. CC: \$1,622,434.
- 9/28/93 7606' Drlg new formation 3 $\frac{3}{4}$  hrs. RD T&M - change out elevators and tongs. Finish TIH w/5" DP and tag top of liner @ 4765'. Drlg - clean out top of liner. Press test csg and liner to 1065 psi; lost 15 psi in 15 min (17.6). TIH and tag up @ 7505'; had 1' cmt on top of landing collar. Drlg landing collar and float. Drlg cmt and shoe; cmt drilled @ 20'/hr. Drlg new formation. BG 26, 50% anhydrate, 50% cmt. MW 16.0, VIS 53, HTFL 9.6, PV 35, YP 21, 58% OIL, 34% SOL, PH 1310, ALK 5.5, LM 7.1, CL 196,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,649,797.
- 9/29/93 7714' Drlg 108 $\frac{1}{2}$  hrs. Drlg, C&C mud. Run equiv mud test 16 ppg to 18.5 ppg, 933 psi. TOOH, change BHA, align motor w/MWD. TIH, break circ. Wash to btm, break in bit. Slide drlg from 7606-7616'. Circ btms up. Slide drlg from 7616-7620'. Drlg from 7620-7683'. Circ btms up. Slide drlg from 7683-7710'. Drlg from 7710-7714'. Avg 4'/hr sliding; 10'/hr rotating. See attached svy report for svys. MW 15.9, VIS 49, HTFL 9.4, PV 31, YP 19, 60% OIL, 33% SOL, PH 1340, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 7, 10" 10, CAKE 2. CC: \$1,705,735.
- 9/30/93 7920' Drlg 206 $\frac{1}{2}$  hrs. Slide drill from 7714-7745'. RS. Slide drill from 7745-7748'. Rotate drill from 7748-7755'. Circ btms up. Slide drill from 7755-7920'. BGG 22, B5 - silt, 100% siltstone. MW 15.9, VIS 48, HTFL 10.8, PV 30, YP 20, 59% OIL, 32% SOL, PH 1360, ALK 5.2, LM 7.0, CL 182,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,726,879.
- 10/1/93 8194' Drlg 274 $\frac{1}{2}$  hrs. Slide drill from 7920-7961'. RS. Slide drill from 7961-8025'. Rotate drill from 8025-8055'. Slide drill from 8055-8100'. Rotate drill from 8100-8105'. Slide drill from 8105-8129'. Rotate drill from 8129'. Mud losses of 5-10 lbs @ 7818', 7873', 7990', 8080'. MW 15.8, VIS 49, HTFL 11.4, PV 37, YP 21, 59% OIL, 32% SOL, PH 1440, ALK 5, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,746,994.
- 10/2/93 8370' MD, 7268' TVD Rotate drill 176 $\frac{1}{2}$  hrs. Slide drill from 8194-8242'. Circ btms up. Short trip 11 stds. Slide drill from 8242-8256'. Rotate drill from 8256-8266'. Slide drill from 8266-8273'. RS. Rotate drill from 8273-8278'. Slide drill from 8278-8322'. Rotate drill from 8322-8335'. Circ samples, WOO. Rotate drill from 8335-8365'. Circ btms up. Rotate drill from 8365-8370'. BGG 20, SH dk grn - blk carb. MW 15.5, VIS 47, HTFL 12, PV 36, YP 22, 60% OIL, 31% SOL, PH 1440, ALK 4.7, LM 6.1, CL 177,000, CA 87/13, GELS 7-2, 10" 11, CAKE 2. CC: \$1,770,645.

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- 10/3/93 8469' Drlg 99'/14 hrs. Rotate drill from 8370-8397'. RS. Rotate drill from 8397-8417'. Slide drill from 8417-8421'. Mix and pump pill. TOOH. Shim motor to 1½"; align motor. TIH, fill pipe @ 4091'. W&R 32' to btm. Slide drill from 8421-8425'. Remove and replace blown-up vibrating hose on mud line under sub. Drlg. MW 15.5, VIS 49, HTFL 10.2, PV 35, YP 21, 61% OIL, 32% SOL, PH 1460, ALK 5.3, LM 6.9, CL 191,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: 1,791,039.
- 10/4/93 8534' TIH w/1° PT motor 65'/14 hrs. Slide drill from 8469-8534'. Circ btm up. Pump pill. TOOH, LD 21 jts 5" DP. Change out motor, align same. Check BOPS. TIH, PU 21 jts 4" DP. Fill pipe @ 4850'. MW 15.5, VIS 52, HTFL 10, PV 37, YP 21, 61% OIL, 31% SOL, PH 1440, ALK 5.5, LM 7.1, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,816,328.
- 10/5/93 8683' Rotate drlg 149'/21 hrs. TIH. Slide drlg from 8535-8552'. Rotate drlg from 8552-8557'. RS. Rotate drlg from 8557-8560'. Circ btms up. Rotate drlg from 8560-8588'. Slide drlg from 8642-8650'. Slide drlg from 8650-8659'. Rotate drlg from 8659-8683'. MW 15.5, VIS 50, HTFL 9.8, PV 34, YP 21, 60% OIL, 32% SOL, PH 1460, ALK 5.0, LM 6.5, CL 178,000, CA 87/13, GELS 7, 10" 11, CAKE 2. CC: \$1,835,290.
- 10/6/93 8534' TVD 7263'. Sidetracking and time drlg @ 8534' 56'/19 hrs. Rotate drlg from 8683-8712'. RS. Slide drlg from 8712-8729'. Circ btms up. Pump pill, LD 6 jts DP, short trip to shoe. WOO & circ. Ream from 8524-8529' and start sidetracking. Sidetracking and time drlg from 8524-8534'. MW 15.6, VIS 50, HTFL 9.8, PV 32, YP 21, 59% OIL, 32.1% SOL, PH 1420, ALK 4.8, LM 6.2, CL 182,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,854,175.
- 10/7/93 8641' 7259' TVD. Slide drlg @ 8641' 107'/23½ hrs. Sidetracking drlg from 8534-8556'. RS. Slide drlg from 8556-8641'. Lost 20 bbls in seepage. MW 15.5, VIS 51, HTFL 9.6, PV 34, YP 20, 60% OIL, 32% SOL, PH 1420, ALK 5.2, LM 6.7, CL 196,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,886,128.
- 10/8/93 8800' 7262.78' TVD. Rotate drlg @ 8800' 159'/23½ hrs. Rotate & drlg from 8641-8712'. RS. Rotate & drlg from 8712-8717'. Slide drlg from 8717-8721'. Rotate & drlg from 8721-8729'. Slide drlg from 8729-8752'. Rotate & drlg from 8752-8800'. Lost 28 bbls in seepage. MW 15.5+, VIS 51, HTFL 9.4, PV 35, YP 20, 60% OIL, 31.1% SOL, PH 1420, ALK 5.0, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 11, CAKE 2. CC: \$1,905,952.
- 10/9/93 8935' 7277.63' TVD. Rotate drlg @ 8935' 135'/22½ hrs. Slide drlg from 8800-8836'. Circ btms up for samples. RS and check BOPS. Rotate drlg from 8836-8848'. Slide drlg from 8848-8899'. Rotate drlg from 8899-8935'. Lost 5 bbls in seepage. MW 15.5, VIS 53, HTFL 9.6, PV 35, YP 20, 61% OIL, 31.2% SOL, PH 1460, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: \$1,924,879.
- 10/10/93 9070' 7298.23' TVD. Rotate drlg @ 9070' 135'/20½ hrs. Rotate drlg from 8935-8943'. Slide drlg from 8943-8962'. Pump pill. Short trip 22 stds and 18 stds in orient tool face and finish TIH 4 stds. Rotate drlg from 8962-8992'. RS and check BOPS. Slide drlg from 8992-9054'. Rotate drlg from 9054-9070'. Lost 10 bbls in seepage. MW 15.6, VIS 53, HTFL 9.4, PV 36, YP 20, 59% OIL, 32% SOL, PH 1520, ALK 4.9, LM 6.3, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,949,076.
- 10/11/93 9191' 7319.62' TVD. Slide drlg @ 9191' 121'/24 hrs. Rotate drlg from 9070-9077'. Slide drlg from 9077'. MW 15.5, VIS 54, HTFL 9.4, PV 39, YP 22, 58% OIL, 31.2% SOL, PH 1500, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,968,044.
- 10/12/93 9309' 7355.4' TVD. Slide drlg @ 9309' 118'/24 hrs. Slide drlg from 9191-9390'. MW 15.5, VIS 55, HTFL 9.0, PV 40, YP 22, 58% OIL, 32% SOL, PH 1495, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,996,128.

COASTAL OIL & GAS CORPORATION  
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- 10/13/93 9002' Sidetrack @ 8987'; now slide drlg @ 9002' 15'/20½ hrs. Slide drlg 9309-9315'. Rot drlg 9315-9351'. RS, work BOPS. Pump pill for sidetrack @ 8987'. POOH 11 jts to 8987'. Ream for sidetrack 8987-8992'. Time drlg @ 6" HR 8987-8990' slide. Time drlg @ 1' HR 8990-9000' slide. Time drlg @ 2' HR 9000-9002' slide. B-5 silt/B-4 SH (contact), BGG 5, CG 0, TG 0. MW 15.5, VIS 52, HTFL 9.0, PV 37, YP 21, 58% OIL, 32% SOL, PH 1580, ALK 5.5, LM 7.1, CL 168,000, CA 84/16, GELS 7, 10" 13, CAKE 2. CC: \$2,016,420.
- 10/14/93 9003' Time drlg (slide) for sidetrack @ 9001' 2'/3½ hrs. Sidetrack drlg from 9002-9008' @ 2 FPH. Sidetrack drlg from 9008-9018' @ 3 FPH, could not get sidetracked. RS, work BOPS. C&C, build slug. Pump pill & TOOH. Change out motor from 1° to 1½°; align same. Install MWD tool. TIH to 4747', fill pipe. Cut drlg line. TIH to 8500'. Orient tool face. TIH, tag bridge @ 8625'. W&R 8625-8670'. Finish TIH to 8996'. Orient tool face and ream from 8996-8670'. Time drlg (slide) for sidetrack @ 9001'. BGG 4-6, CG 0, TG @ 9018' 22. MW 15.6+, VIS 55, HTFL 9.2, PV 38, YP 23, 57% OIL, 33% SOL, PH 1610, ALK 5.0, LM 6.5, CL 165,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,052,375.
- 10/15/93 9011' Prep to screw onto fish 8'/11½ hrs. Slide drlg for sidetrack from 9003-9009' @ 6"-1'/hr. RS. Slide drlg for sidetrack from 9009-9011' @ 1'/hr. Lost 800 psi, circ mix pill and slug pipe. TOOH, change out jars and MWD tool. Left bit and btm 4' of mud motor and 10.7' of rotor in hole. PU MWD and align same w/mud motor pulled; will attempt to screw back onto fish. TIH, fill pipe @ 4700'. Install rot head, prep to try and screw onto fish. MW 15.6, VIS 51, HTFL 8.8, PV 34, YP 20, 57% OIL, 33% SOL, PH 1680, ALK 4.8, LM 6.2, CL 162,000, CA 84/16, GELS 7, 10" 12, CAKE 2. CC: \$2,072,887.
- 10/16/93 9011' TIH w/1½° bit and motor to finish sidetrack. Attempt to screw back onto fish. TOOH — no rec. PU overshot and make up fishing tools. RS, work BOPS. TIH w/fishing tools. LD 3 jts 4" DP; PU 3 jts 4" DP. Fish for bit and motor part. TOOH — rec all of fish, LD same. PU BHA #20, motor and MWD. Align motor and MWD. PU kelly and test ok. TIH w/1½° bit and motor. MW 15.9, VIS 58, HTFL 8.8, PV 40, YP 26, 57% OIL, 34% SOL, PH 1520, ALK 4.8, LM 6.2, CL 160,000, CA 85/15, GELS 9, 10" 18, CAKE 2. CC: \$2,105,568.
- 10/17/93 9019' POOH w/fish (bit, lower section of mud motor and rotor) 8'/5½ hrs. Finish TIH w/bit, 1½° mud motor and BHA. Time drlg for sidetrack; slide from 9011-9019'. RS, work BOPS. Lost 700 psi; attempt to screw back @ separation. Pump slug and POOH left btm 3' of mud motor, bit and rotor in hole. WO fishing tools. Make up fishing tools — overshot w/3¼" basket grapple. TIH w/same. Engage fish @ 9016'. Build slug; pump pill and POOH w/fish. MW 15.8, VIS 63, HTFL 8.8, PV 42, YP 26, 58% OIL, 32% SOL, PH 1600, ALK 4.5, LM 5.8, CL 165,000, CA 84/16, GELS 8, 10" 19, CAKE 2. CC: \$2,125,934.
- 10/18/93 9024' Changing out mud motor and stabilizer; thread (lock stabilizer) 5'/2½ hrs. Finish POOH — rec all of fish. LD fish; break down and lay out fishing tools. RS, check BOPS. PU motor and align MWD; test ok. TIH, PU 12 jts 4" SHDP. Circ and work pipe to clean up any junk on btm. Slide drlg from 9019-9024'. MWD started acting up. Mix and pump pill. POOH, stabilizer on motor had backed half way off, causing bearings to fall; motor locked up. Change out MWD and check bit — ok. Change out mud motor and stabilizer — thread (lock stabilizer). MW 15.9, VIS 57, HTFL 9.0, PV 40, YP 23, 56% OIL, 33% SOL, PH 1580, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 8, 10" 15, CAKE 2. CC: \$2,148,896.
- 10/19/93 9086' TOOH to find PSI loss 62'/12 hrs. Align mud motor with MWD and test — ok. TIH, RS. TIH to 8917', fill pipe @ 5200'. W&R 8917-9024'. Slide drlg 9024-9030'. Rot drlg 9030-9035'. Slide drlg 9035-9064'. Rot drlg 9064-9086'. PU to make conn; lost 800 psi, slack off and touch btm 10' high. Circ and clean hole while building pill. Pump pill. TOOH to find PSI loss. B-4 silt, BGG 16, CG 0, TG @ 9024' 17. MW 15.9, VIS 56, HTFL 9.0, PV 38, YP 24, 55.5% OIL, 33.5% SOL, PH 1600, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 7, 10" 14, CAKE 2. CC: \$2,181,398.

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- 10/20/93 9086' WO spear to fish 5 3/4" OD, WP ext and OS. TOOH for press loss. Motor backed off @ shim connection. RS, work pipe and blind rams. Cut drlg line. WO fishing tools. PU 6 1/8" OS w/5" grapple, 5 3/4" WP ext, bumper sub jars and TIH. Tag obstruction @ 9013'. Circ & work OS to top fish @ 9084', work fish. Mix and pump pill. TOOH, left 5 3/4" OD WP ext & 6 1/8" OS in hole. Backed off WP, top sub & 4' ext. 17.43' OS & WP left in hole. Have 6' to spear into. WO spear. MW 16.4, VIS 63, HTFL 8.6, PV 43, YP 24, 55% OIL, 34.3% SOL, PH 1560, ALK 3.8, LM 4.9, CL 125,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,201,591.
- 10/21/93 8900' MD, 7272' TVD Sidetrack #4, time drlg 6"/hr 3 7/7 hrs. WOO. RS. WOO. PU bit, 1.4° D475 Drilex motor, align motor w/MWD. TIH to 4700'. Fill pipe, orient and test tools. TIH. Ream and start sidetracking. Slide time drill @ 6"/hr. Cane Creek B-4 Silt, 100% siltstone, BGG 15, TG 32. MW 16, VIS 60, HTFL 9.6, PV 41, YP 21, 57% OIL, 33.1% SOL, PH 1520, ALK 3.9, LM 5, CL 159,000, CA 85/15, GELS 8, 10" 13, CAKE 2. CC: \$2,259,324.
- 10/22/93 8912' TIH 12 1/4 hrs. Time drill. RS. Time drill to 8912'. PU, check sidetrack. Motor stalling; could not get started again. Mix and pump pill. TOOH, change out Drilex motor. PU 1.3° D475 Drilex motor. TIH, orient motor and MWD, TIH. Cane Creek B-4 Silt, 50% siltstone, 50% SH, BGG 8-12. MW 15.5, VIS 51, HTFL 9.4, PV 36, YP 20, 58% OIL, 31.1% SOL, PH 1400, ALK 52, LM 6.73, CL 170,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,287,202.
- 10/23/93 8924', 7276.46' TVD Drlg 12 1/2 hrs. TIH. Orient motor, W&R 24' to btm. Time drlg, mud motor stalling. Pump pill. TOOH, LD Drilex motor. PU PT, 1 1/4° motor, align w/MWD, test motor. TIH, fill DP, orient tool. TIH, time drlg 8912-8924' @ 8918', motor stalling as if in frac or formation change. B-4 Silt/B-4 SH contact, 50% siltstone, 50% SH w/anhy and salt fill frac, BGG 12-16, TG 12. MW 15.5, VIS 59, HTFL 10.2, PV 42, YP 19, 56% OIL, 33% SOL, PH 1520, ALK 48, LM 6.2, CL 192,000, CA 82-18, GELS 7, 10" 3, CAKE 2. CC: \$2,318,858.
- 10/24/93 9038', 7302' TVD Rotate drill 114 1/2 hrs. Time drlg from 8929'. RS. Slide drlg from 8929-8970'. Circ btms up. Pump pill. TOOH, change out mud motors, align motor w/MWD, Baker-lock stb on motor. Work BOPS. TIH. Fill pipe @ 4995'. Orient tools. TIH, slide drlg from 8970-8991'. Rotate drill. B-5 Silt/B-5 SH boundary, 100% siltstone, BGG 30-40, TG 20 @ 8970'. MW 15.6, VIS 54, HTFL 10.2, PV 36, YP 20, 58% OIL, 32% SOL, PH 1560, ALK 48, LM 62, CL 150,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,341,609.
- 10/25/93 9272', 7366' TVD Drlg 234 1/2 hrs. Rotate drill 9038-9054'. Slide drill 9054-9084'. RS, Rotate drill 9084-9194'. Slide drill 9194-9249'. Rotate drill 9249-9272'. Lost approx 16 bbls mud to seepage last 24 hrs. MW 15.5, VIS 52, HTFL 9.6, PV 35, YP 19, 58% OIL, 32% SOL, PH 1440, ALK 52, LM 6.7, CL 142,000, CA 84-16, GELS 7, 10" 11, CAKE 2. CC: \$2,361,319.
- 10/26/93 9332' TIH 60 1/11 hrs. Rotate drill from 9272-9283'. Slide drill from 9283-9301'. RS. Slide drill from 9301-9328'. Rotate drill from 9328-9332'. Lost pump press after conn @ 9332', 200 PSI @ 108 SPM to 2400 PSI @ 110 SPM, set back down on btm w/10,000#. Turn to right; got press increase. Mix and pump pill. TOOH, LD motor. PU new motor, weld straps on conn of new motor and Baker-lock rest of conn, orient motor w/MWD, TIH. Lost approx 19 bbls mud to seepage last 24 hrs. MW 15.5, VIS 55, HTFL 9.4, PV 37, YP 21, 58% OIL, 32% SOL, PH 1540, ALK 5.1, LM 6.6, CL 133,000, CA 84-16, GELS 8, 10" 13, CAKE 2. CC: \$2,384,750.
- 10/27/93 9424' TIH w/setting tool and retainer to 7479.61' 92 1/6 hrs. TIH w/motor, MWD, and bit. Fill DP and orient motor @ 8525'. Install rot head and TIH. Rotate drlg from 9332-9394'. RS. Rotate drlg from 9394-9406'. Slide drlg from 9406-9424'. Pump pill and TOOH 19 stds. C&C. TOOH and SLM out, LD 2 jts & HW DP and jars. LD motor, 2 knobby monell and MWD monell and all XO. PU setting tool and retainer and TIH w/DP to 7479.61'. MW 16.0, VIS 65, HTFL 9.6, PV 42, YP 21, 57% OIL, 34% SOL, PH 1500, ALK 5.2, LM 6.7, CL 159,000, CA 85-15, GELS 8, 10" 14, CAKE 2. CC: \$2,408,023.

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10/28/93 9424' Press testing BOPS. WOO. Set retainer @ 7563'. RU Halliburton, test csg and retainer 500 psi - ok and DP 1000 psi - ok. Injection rate 1½ bbls min, 2600 psi cmt w/125 sx prem H w/.1% HR-4, 100 sx below retained and 75 sx on top. LD 3 jts DP. Reverse out, no cmt and RD Halliburton. RU LD mech, LDDP and break kelly and LD 4" HWDP. Change out lower pipe rams. LD Homco tools and load out 4" DP and 4" HWDP. WO 27/8" tbg. Press testing BOPS. MW 16.3, VIS 68, HTFL 9.8, PV 44, YP 22, 54% OIL, 35% SOL, PH 1560, ALK 5.1, LM 6.6, CL 142,000, CA 82-18, GELS 8, 10" 13, CAKE 2. CC: \$2,438,670. FINAL DRILLING REPORT.

COASTAL OIL & GAS CORPORATION  
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TITE HOLE

KANE SPRINGS UNIT #16-1

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Kane Springs Unit  
Grand County, UT  
Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{3}{8}$ " @ 823'; 10 $\frac{3}{4}$ " @ 4995'  
7 $\frac{7}{8}$ " @ 7600'

CWC(M\$): 2,585.0

- 10/29/93 9424' Running GR/CBL w/Halliburton. Finish press testing BOPS. Tests tbg rams, blind rams 5000 psi 10 min - ok, hyd 2500 psi 10 min - ok. PU 237 jts 2 $\frac{7}{8}$ " tbg 6.5# N-80 EUE, total 7411.62'. Disp hole w/300 bbls pit wtr and 575 bbls 3% KCL wtr wt 8.5. TOOH w/tbg for logs. ND Grant rot head and NU 13 $\frac{3}{8}$ " XO flange for lubricator. RU Halliburton and run GR and CBL w/2500 psi. CC: \$2,467,797.
- 10/30/93 9424' Making up BHA, 6 $\frac{1}{2}$ " mill and csg scraper. ND XO flange for lubricator. Put new ring w/teflon tape and NU XO flange for lubricator. RU loggers and test XO flange 3400 psi. Run GR-CBL w/3400 psi to 7025'. Log back to 1650', top cmt 1860. RD loggers and ND XO flange. PU 4' SPF gun, sub SX, 2 $\frac{7}{8}$ " jts, P/nipple, 2 $\frac{7}{8}$ " jts, r/nipple, 2 $\frac{7}{8}$ " jts, XO, sub, Baker pkr, setting tool, sub, 2 $\frac{7}{8}$ " juts, subj. TIH w/tbg, pkr, and guns. Pkr wouldn't go through liner hanger. TOOH w/pkr, guns and LD 2 jts. LD pkr, stand back perf gun. WO mill csg scraper and mill. Make up mill and csg scraper. CC: \$2,476,763.
- 10/31/93 9424' TIH w/stinger and tbg. TIH w/tbg, mill and scraper top liner. PU power swivel. Mill out linr top w/6 $\frac{1}{2}$ " mill. LD power swivel. TIH w/tbg, mill and scraper to 6843'. TOOH w/tbg, mill and scraper. PU perf guns and pkr tools. TIH w/tbg, pkr and perf gun. Run GR & CL w/Halliburton and tie in w/R A Marker. RIH w/1 std tbg and PU 1 jt tbg and 8' pup. Run GR and CL w/Halliburton and tie in w/R. A. Marker. Drop ball and press up and set pkr @ 6710' w/2000 psi and 15,000# wt on pkr. TOOH w/setting tool and LD w/1 hr time change fall back. PU stinger, 1 jt 2 $\frac{7}{8}$ " tbg and f/nipple and 71 stds. CC: \$2,517,574.
- 11/1/93 9424' Flow testing well and swabbing well 3000'. PU pup and 1 jt 2 $\frac{7}{8}$ " tbg and install tbg donut, set w/12,000# wt on seal assembly and test 2000 psi 5 min - ok. ND BOPS and NU 10,000# XO, 5000# tree and test tree and line to separate to 5000 psi - ok and retrieve 2-way BP valve. Swab well 3000', swab cup stacked out, run w/swab mandrel - no go, stacked out. Run in w/sinker bars 6000'. Drop bar and five perf off. Flow test well - no press or fluid to surface. Flow testing well and swabbing well dn 3000'; total 13 run, 25.3 bbls wtr to surface w/weak blow. CC: \$2,563,006.

# COASTAL OIL & GAS

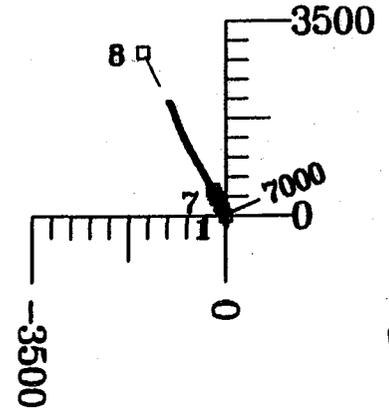
KANE SPRINGS #16-1  
GRAND COUNTY UTAH  
ACTUAL VS PROPOSED

*well log*

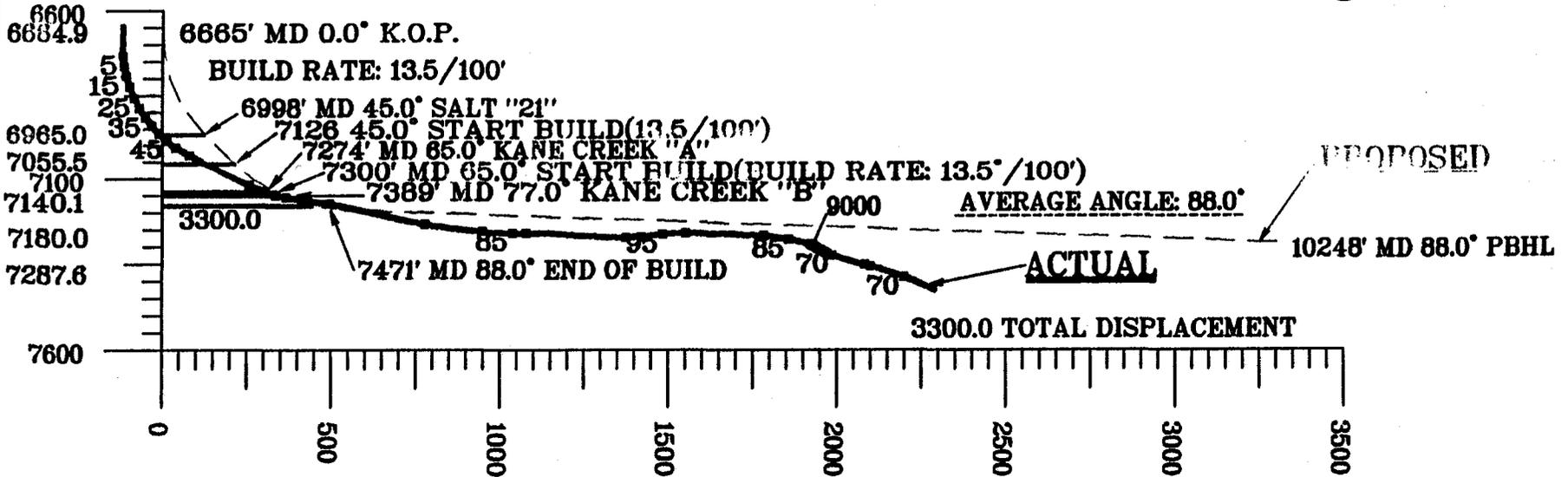
HORIZONTAL SCALE:  
1"=3500'

Cobb Horizontal Technology  
& Directional Services

SURFACE LOCATION:  
3920' FSL & 1980' FWL  
BOTTOM HOLE LOCATION:  
5978' FSL & 949' FWL  
7426' TVD 9392' MD



VERTICAL SCALE:  
1"=500'



PLANE OF VERT SECTn 333.13°  
PLOT DATE 07-23-1993

### WELL PROPOSAL

Sec	MD	TVD	VS	INC	DIR	LAT	DEP	TGT
1	6664.9	6664.9	0.0	0.0	333.13	0.0	0.0	
2	6998.2	6965.0	124.3	45.0	333.13	110.9	-56.2	
3	7126.2	7055.5	214.8	45.0	333.13	191.6	-97.1	
4	7274.4	7140.1	335.6	65.0	333.13	299.3	-151.7	
5	7300.6	7151.1	359.3	65.0	333.13	320.6	-162.4	
6	7389.5	7180.0	443.2	77.0	333.13	395.4	-200.3	
7	7471.0	7190.7	523.9	88.0	333.13	467.3	-236.8	
8	10248.8	7287.8	3300.0	88.0	333.13	2943.8	-1491.5	



: COASTAL OIL & GAS  
: KANE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)  
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COBB DIRECTIONAL DRILLING \ HORIZONTAL TECHNOLOGY

MASTAL OIL & GAS  
 SAGE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)

MINIMUM CURVATURE CALCULATIONS

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MEASURED DEPTH (Ft)	INC. Deg	DIR.		TVD (Ft)	VERT. (Ft)	N / S		E / W		LEASE LINE		CLOSURE		DLEG	
		Dir	Dir			(Ft)	(Ft)	(Ft)	(Ft)	FSL (Ft)	FWL (Ft)	AZIMUTH Deg Min	DIST (Ft)	SEV. /100(Ft)	
6649.0	3.00	S	1.00 E	6646.8	-118.5	-128.2	9.0	3791.8	1969.0	S	4 2 E	129	0.00		
6650.0	2.93	S	3.02 W	6647.8	-118.5	-128.3	9.0	3791.7	1969.0	S	4 2 E	129	21.65		
6700.0	1.48	N	36.85 W	6697.8	-118.5	-128.5	8.6	3791.5	1968.6	S	3 49 E	129	7.80		
6750.0	7.14	N	13.46 W	6747.6	-115.2	-125.3	7.6	3794.7	1967.6	S	3 28 E	126	12.74		
6800.0	15.85	N	11.47 W	6796.6	-105.7	-115.7	5.6	3804.3	1965.6	S	2 45 E	116	17.44		
6850.0	23.00	N	14.95 W	6843.6	-89.3	-99.3	1.6	3820.7	1961.6	S	0 54 E	99	14.56		
6900.0	30.25	N	17.61 W	6888.3	-67.5	-78.0	-4.7	3842.0	1955.3	S	3 26 W	78	14.75		
6950.0	37.94	N	19.08 W	6929.6	-39.7	-51.4	-13.6	3868.6	1946.4	S	14 50 W	53	15.47		
7000.0	45.70	N	20.82 W	6966.8	-6.7	-20.1	-25.0	3899.9	1935.0	S	51 8 W	32	15.72		
7050.0	53.78	N	21.57 W	6999.2	31.1	15.3	-38.7	3935.3	1921.3	N	68 27 W	42	16.20		
7100.0	59.16	N	22.37 W	7025.1	73.7	54.8	-54.9	3974.8	1905.1	N	45 6 W	78	10.84		
7150.0	63.96	N	23.10 W	7050.5	116.6	94.5	-71.4	4014.5	1888.6	N	37 3 W	118	9.70		
7200.0	63.63	N	23.03 W	7072.6	161.3	135.8	-88.9	4055.8	1871.1	N	33 14 W	162	0.67		
7250.0	63.73	N	23.70 W	7094.8	206.0	176.9	-106.7	4096.9	1853.3	N	31 6 W	207	1.22		
7300.0	64.91	N	22.91 W	7116.5	251.0	218.2	-124.6	4138.2	1835.4	N	29 44 W	251	2.76		
7350.0	69.05	N	22.80 W	7136.2	296.8	260.6	-142.5	4180.6	1817.5	N	28 41 W	297	8.28		
7400.0	77.03	N	23.11 W	7151.1	344.4	304.5	-161.0	4224.5	1799.0	N	27 52 W	344	15.98		
7450.0	82.24	N	24.36 W	7159.7	393.5	349.6	-180.7	4269.6	1779.3	N	27 21 W	394	10.70		
7500.0	82.81	N	24.50 W	7166.0	443.1	394.7	-201.4	4314.7	1758.6	N	27 2 W	443	1.18		
7550.0	80.00	N	24.98 W	7173.1	492.5	439.6	-222.0	4359.6	1738.0	N	26 47 W	493	5.71		
7600.0	77.58	N	26.41 W	7183.1	541.5	483.8	-243.2	4403.8	1716.8	N	26 42 W	541	5.58		
7650.0	77.80	N	27.50 W	7193.7	590.3	527.3	-265.4	4447.3	1694.6	N	26 43 W	590	2.18		
7700.0	76.95	N	28.63 W	7204.6	639.1	570.3	-288.4	4490.3	1671.6	N	26 50 W	639	2.79		
7750.0	77.16	N	28.77 W	7215.9	687.8	613.0	-311.9	4533.0	1648.1	N	26 58 W	688	0.51		
7800.0	78.64	N	28.76 W	7226.4	736.7	655.9	-335.3	4575.9	1624.7	N	27 5 W	737	2.96		
7850.0	80.64	N	28.90 W	7235.5	785.8	699.0	-359.1	4619.0	1600.9	N	27 11 W	786	4.01		
7900.0	82.18	N	29.82 W	7242.8	835.2	742.1	-383.2	4662.1	1576.8	N	27 19 W	835	3.57		
7950.0	83.24	N	30.14 W	7249.0	884.8	785.1	-408.0	4705.1	1552.0	N	27 28 W	885	2.22		
8000.0	84.34	N	30.56 W	7254.5	934.4	828.0	-433.1	4748.0	1526.9	N	27 37 W	934	2.35		
8050.0	86.57	N	30.88 W	7258.5	984.1	870.8	-458.6	4790.8	1501.4	N	27 46 W	984	4.52		

COBB DIRECTIONAL DRILLING \ HORIZONTAL TECHNOLOGY

DASTAL OIL & GAS  
 ANE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)

MINIMUM CURVATURE CALCULATIONS

21-DEC-93 Page 2

MEASURED DEPTH (Ft)	INC. Deg	DIR. Deg	TVD (Ft)	VERT. (Ft)	N / S (Ft)	E / W (Ft)	LEASE LINE		CLOSURE		DLEG SEV. /100(Ft)
							FSL (Ft)	FWL (Ft)	AZIMUTH Deg Min	DIST (Ft)	
8100.0	89.87	N 30.95 W	7259.9	1033.9	913.7	-484.3	4833.7	1475.7	N 27 55 W	1034	6.60
8150.0	89.87	N 31.02 W	7259.8	1083.8	956.6	-510.0	4876.6	1450.0	N 28 4 W	1084	0.14
8200.0	88.46	N 31.06 W	7260.4	1133.7	999.4	-535.8	4919.4	1424.2	N 28 12 W	1134	2.81
8250.0	86.04	N 30.77 W	7262.8	1183.5	1042.2	-561.5	4962.2	1398.5	N 28 19 W	1184	4.89
8300.0	86.37	N 30.50 W	7266.3	1233.2	1085.2	-586.8	5005.2	1373.2	N 28 24 W	1234	0.86
8350.0	86.94	N 29.70 W	7269.0	1283.1	1128.4	-611.8	5048.4	1348.2	N 28 28 W	1284	1.96
8400.0	86.67	N 29.57 W	7271.9	1333.0	1171.8	-636.5	5091.8	1323.5	N 28 31 W	1333	0.61
8450.0	91.02	N 28.34 W	7273.1	1382.9	1215.5	-660.8	5135.5	1299.2	N 28 32 W	1383	9.04
8500.0	96.39	N 26.05 W	7269.8	1432.7	1259.8	-683.5	5179.8	1276.5	N 28 29 W	1433	11.66
8550.0	95.10	N 25.40 W	7263.5	1482.3	1304.5	-705.0	5224.5	1255.0	N 28 23 W	1483	2.89
8600.0	91.47	N 25.26 W	7260.8	1532.2	1349.6	-726.3	5269.6	1233.7	N 28 17 W	1533	7.26
8650.0	88.73	N 25.09 W	7260.7	1582.2	1394.9	-747.6	5314.9	1212.4	N 28 11 W	1583	5.50
8700.0	89.42	N 24.90 W	7261.5	1632.1	1440.2	-768.7	5360.2	1191.3	N 28 5 W	1632	1.44
8750.0	88.18	N 23.86 W	7262.5	1682.1	1485.7	-789.4	5405.7	1170.6	N 27 59 W	1682	3.24
8800.0	87.51	N 23.87 W	7264.4	1731.9	1531.5	-809.3	5451.5	1150.7	N 27 51 W	1732	1.32
8850.0	84.95	N 23.41 W	7267.6	1781.8	1577.2	-829.4	5497.2	1130.6	N 27 44 W	1782	5.22
8900.0	80.89	N 20.09 W	7273.7	1831.2	1623.1	-848.0	5543.1	1112.0	N 27 35 W	1831	10.43
8950.0	78.32	N 20.34 W	7282.7	1880.0	1669.3	-865.0	5589.3	1095.0	N 27 23 W	1880	5.17
9000.0	65.99	N 20.14 W	7296.4	1927.3	1714.0	-881.5	5634.0	1078.5	N 27 13 W	1927	24.67
9050.0	74.90	N 19.51 W	7320.5	1970.1	1754.6	-896.1	5674.6	1063.9	N 27 3 W	1970	17.86
9100.0	74.17	N 19.47 W	7334.0	2017.8	1800.1	-911.7	5720.1	1048.3	N 26 52 W	2018	1.46
9150.0	74.61	N 21.06 W	7347.4	2065.6	1845.2	-928.6	5765.2	1031.4	N 26 43 W	2066	3.19
9200.0	74.66	N 21.09 W	7360.5	2113.7	1890.2	-946.0	5810.2	1014.0	N 26 35 W	2114	0.10
9250.0	71.81	N 20.57 W	7375.0	2161.2	1934.9	-963.0	5854.9	997.0	N 26 28 W	2161	5.77
9300.0	69.18	N 21.67 W	7391.4	2208.2	1979.0	-979.9	5899.0	980.1	N 26 20 W	2208	5.65
9350.0	67.48	N 21.64 W	7410.2	2254.4	2022.1	-997.0	5942.1	963.0	N 26 15 W	2255	3.40
9392.0	67.80	N 21.90 W	7426.1	2293.0	2058.2	-1011.4	5978.2	948.6	N 26 10 W	2293	0.95

DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

5. Lease Designation and Serial Number:

ML-44 333

6. If Indian, Alotbee or Tribe Name:

N/A

7. Unit Agreement Name:

Kane Springs Fed Unit

8. Well Name and Number:

Kane Springs Unit 16-1

9. API Well Number:

43-019-31341

10. Field and Pool, or Wildcat:

Wildcat

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:

Coastal Oil & Gas Corporation

3. Address and Telephone Number:

P.O. Box 749, Denver, CO 80201-0749

(303) 573-4476

4. Location of Well

Footages: 960' FSL & 1960' FWL

QQ, Sec., T., R., M.: SESW, Section 16-T25S-R18E

County: Grand

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT

(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

SUBSEQUENT REPORT

(Submit Original Form Only)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other Drill & Complete
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Date of work completion 11/1/93

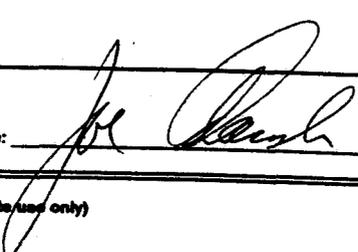
Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

\* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

See attached chronological history report and directional survey.

13.

Name & Signature: 

Title:

Joe Adamski  
Environmental Coord.

Date:

3/9/94

(This space for State use only)

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1

Sec. 16-T25S-R18E

Kane Springs Unit

Grand County, UT

Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{3}{8}$ " @ 823'; 10 $\frac{3}{4}$ " @ 4995'

7 $\frac{7}{8}$ " @ 7600'

DHC(M\$): 2,240.0

- 7/23/93 MIRU, Drilling Service, build rat hole. Drill 30" hole to 67'. Set 20" @ 67' cmt w/7 yds Ready Mix. Drilled hole 7/24/93, 7:00 AM.
- 7/26/93 Dug rat hole and mouse and cellar, 10' X 8'.
- 8/10/93 MI Parker #233 - roading from Altamont, UT. Install liner. Rig moving from Altamont, UT. Trucks were on loc Saturday, Started hauling Sunday, 8/8/93. CC: \$18,638.
- 8/11/93 MIRU. CC: \$18,638.
- 8/12/93 Prep to RURT. MIRT, set matting boards. Level rig pad. Haul in sand and gravel for rig base. CC: \$58,010.
- 8/13/93 RURT. Est spud date Sunday, 8/15/93. CC: \$59,469.
- 8/16/93 139' Drlg 50 $\frac{1}{4}$  hrs. Spud @ 10:00 PM, 8/15/93. RURT. Install rotating head. PU BHA, install blooie line and RU air. Drill, RU air/mist line. Drill, PU 9" collar, 3 PT and change out rotating head rubber. Drill. CC: 102,199.
- 8/17/93 710' Drlg 571 $\frac{1}{2}$  hrs. Remove and install RT rubber. Drlg w/air. RS, drlg w/air, svy. Ream and blow hole. Drlg w/air. Blow hole, hit wtr 2 518', begin airmisting @ 545'. Drlg, blow and clean hole from 518-545'. Drlg, svy, drlg. Svys:  $\frac{1}{2}$ " @ 266';  $\frac{1}{2}$ " @ 616'. CC: \$207,199.
- 8/18/93 825' Cut off conductor pipe 115 $\frac{1}{2}$  hrs. Drlg to 825'. Circ & blow hole, finish short trip. Short trip to 3 PT free. Svy. Pump gelled sweep and load hole. TOOH, LD 1-9" DC, 6 PT, SS, 2 3 PT rmrs. RU Csg Tools, RIH w/20 jts 13 $\frac{3}{8}$ " 545# J55 8RD ST&C csg, tally row = 829.21', set @ 823', FC @ 786'. RU Howco, pump 20 bbls fresh wtr. Mix & pump 450 sx HLC Type V cmt w/10# sx CalSeal, 4% gel, 1% CaCl<sub>2</sub> tail w/380 sx Type V w/2% CaCl<sub>2</sub>,  $\frac{1}{4}$ # sx flocele. Disp w/124 BW, bump plug to 800 psi, 500 psi over. Circ 74 bbls cmt to pit. WOC. Cmt in place @ 9:30 PM, 8/17/93. Cut off and cond csg. Witnessed by Glenn Goodwin, State of UT Div of OG&M. Svy:  $\frac{1}{4}$ " @ 880'. CC: \$248,997.
- 8/19/93 825' NU and test BOPE. Cut off csg. Install csg head and well. Test weld to 750 psi - ok. NU BOPE and chk lines. Fabricate blooie line and modify chk line. Chg out pipe rams from 3 $\frac{1}{2}$ " to 5". Test BOPS, leak between BOP and double stud adapter, 10M flange. ND BOPS to change ring gasket. CC: \$282,293.
- 8/20/93 825' Blow hole dry to drill out. NU and test lower pipe rams. Leaking between double stud adapter and lower pipes. ND BOPS; remove double stud adapter. WO double stud adapter from Oil Field Rental; PU 6 PT, SS, 3 PT, 3 PT, LD 5 8 $\frac{1}{2}$ -9" DC. NU BOPS and test BOPE to 5000 psi, hydril to 2500 psi, csg to 1550 psi. All tests were valid but not witnessed; notified Frank Matthews w/UT State DOGM. Set wear bushing. PU BHA. TIH, tag cmt @ 768'. Blow hole dry. CC: \$317,691.
- 8/21/93 1678' Fill pipe w/wtr, TFNB #3 853 $\frac{1}{2}$  hrs. Drlg cmt, FC, cmt shoe. Dry hole. Drlg w/air. Svy. Drlg w/air. RS. Drlg w/air, hit wtr @ 1470'. Unload hole. Drlg w/air mist. Svy. Drlg. Fill pipe w/wtr. TFNB. Svys:  $\frac{1}{2}$ " @ 957',  $\frac{1}{4}$ " @ 1440'. CC: \$330,909.
- 8/22/93 2260' Drlg 582 $\frac{1}{2}$  hrs. TFNB, drlg w/air mist. Reserve pit full. RS. Drlg w/wtr. Trip for string float. Svy. Drlg w/aerated wtr. Svy:  $\frac{3}{4}$ " @ 1984'. CC: \$354,266.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 2

- 8/23/93 2925' Drlg 665'/23 hrs. Drlg w/aerated wtr. RS. Svy. Drlg w/wtr and aerated wtr. Svy: 1½° @ 2486'. CC: \$363,963.
- 8/24/93 3375' Drlg 450'/22 hrs. Drlg w/wtr. Svy. Drlg w/aerated wtr. RS. Drlg w/air/aerated wtr. Change out swivel packing. Drlg. Svy: 1° @ 2885'. CC: \$376,866.
- 8/25/93 3667' Drlg w/air and wtr 292'/22 hrs. Drlg w/air and wtr w/750 CFM. RS and check BOPS. WL svy @ 3383'. Change out rot head rubber. Drlg w/air and wtr w/750/2000 CFM. WL svy @ 3647'. Drlg w/air and wtr w/1200 CFM. Svy: 2° @ 3383', 1½° @ 3647'. Wtr/aerated wtr, MW 8.4, VIS 27. CC: \$391,576.
- 8/26/93 3931' Drlg w/air and wtr 264'/23½ hrs. Drlg w/air and wtr. RS and check BOPS. Drlg w/air and wtr. Wtr, MW 8.4, VIS 27. CC: \$401,734.
- 8/27/93 4185' Drlg w/air and wtr. 254'/16 hrs. Drlg w/air & wtr, load hole w/wtr before trip. Svy: 2° @ 3926'. TFNB. Rls & check BOP's. TIH w/bit & PU six 6¾" DC's & change out jars. Wash 40' to btm, 10' fill. Drlg w/wtr. Unload hole w/air. Drlg w/air & wtr. 1st Ismay approx 4235', Honaker Trail 40% LS, 60% SH, BGG 2, CG 0, TG 0. MW 8.4, VIS 27. CC: \$424,545.
- 8/28/93 4738' Drlg w/air and wtr. 553'/23 hrs. Drlg w/air & wtr. Rls & check BOP's. Drlg w/air & wtr. WL svy: 1½° @ 4495'. Drlg w/air & wtr. Est Paradox Salt #2 @ 4300', Clastic #2 @ 4528', Salt #3 @ 4610', Clastic #3 @ 4680', 40% SH, 30% siltstone, 30% SS, BGG 2, tr CG. MW 9.8, VIS 27. CC: \$443,727.  
Drlg Break    MPF    Gas Units  
4260-4270'    8-3½-5    tr-1200-tr    Gas cut wtr.
- 8/29/93 4995' TIH w/bit & Monel DC. 257'/6½ hrs. Drlg w/air & wtr. Rls & check BOP's. Drlg w/air & wtr. Circ for short trip. Drlg 10'. ST 15 std, 5' fill. C&C for logs. Svy: 1¼° @ 4960'. TOOH for logs & SLM 4997.62'. RU Schlumberger & run DLL-GR-CAL, Sonic from TD to sfc csg & GR to sfc. Logger TD 4999', BHT 136°F, RD logger. Pull wear bushing & LD shock sub & 3 pt reamer. WO Monel DC. TIH w/bit & Monel DC. MW 9.8, VIS 27. CC: \$460,839.
- 8/30/93 4995' ND BOP's & prep to set csg slips. Finish TIH w/bit & Monel DC. Wash 50' to btm, no fill. C&C from csg. TOOH w/bit & run multi-shot svy. RU, LD machine, & 12 - 8¼" DC, Monel DC, reamer. RU T&M csg crew. Run 117 jts 10¾" 60.7# S-95 Hyd-521, equip w/diff shoe & float, and 20 centralizers, total 5010.18'. RU Halliburton & circ csg before cmt. Cmt w/Halliburton, pump 40 bbls Super Flush, 690 sx Silica Light w/.4% gel, 4% CaCl<sub>2</sub>, .3% Halad-413, ¼ pps Flocele, 3 pps Capseal, wt 11.0, yd 2.82 CF/sx, tailed w/1145 sx PPAG Type 5, 10% salt, .6% Halad-322. CC: \$739,100.
- 8/31/93 4995' TIH w/bit. Prep to test csg. PU BOPS and set slips w/275,000#. Cut 10¾" csg. NU head. Test head w/1500 psi. Test backside to 4400 psi. NU BOPS. Test BOPS, valves, lines, manifold, chk, U&L kelly cock to 10,000 psi for 10 min, hydril 2500 psi for 10 min. PU bit, install wear bushing. PU BHA and install drill pipe rubbers. TIH, prep to test csg and disp wtr w/oil mud. MW 14.3, VIS 75, HTFL 3.2, PV 55, YP 30, 73/27% OIL, ALK 4.5, LM 5.8, CL 20M. CC: \$759,236.
- 9/1/93 5069' TOOH for plugged bit 74'/4½ hrs. Test csg w/3000 psi. Drill float, shoe jt and shoe. Drill 4995-5005'. C&C. Tested shoe to 18.5 EMW w/13.9 ppg mud and 1200 psi surf press - ok. Drill 5009-5069'; bit plugged. Slug pipe and POOH. MW 13.8, VIS 68, HTFL 1.8, PV 42, YP 30, 56% OIL, 25% SOL, PH 960, ALK 4.5, LM 5.8, CL 116, CA 74/26, GELS 8, 10" 12, CAKE 1. CC: \$809,948.

**COASTAL OIL & GAS CORPORATION**  
**CHRONOLOGICAL HISTORY**

**TITE HOLE**

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

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- 9/2/93 5542' Drlg 473'/15½ hrs. POOH - pull wear ring. Finish POOH. Change jets in bit, install wear ring, PU 6 DC's, TIH. Drlg, RS, drlg. Work tight hole @ 5308'. Drlg, circ - WL Svy - mis-run. Drlg, circ - WL Svy, drlg. BG 35, CG 0, TG 31. NOTE: Bit jets plugged w/plastic ties stock @ 5308' twice; pulled loose each time with hit from jars. Svy: 1½° @ 5357'. MW 14.0, VIS 55, HTFL 200 psi 1.8, PV 37, YP 28, 56% OIL, 24.5% SOL, PH 880, ALK 5, LM 6.5, CL 160,000, CA 74/26, GELS 7, 10" 10, CAKE 1. CC: \$838,316.
- 9/3/93 6160' Drlg 618'/22½ hrs. Drlg, RS, drlg, circ - WL svy, drlg. Formation elastic #15, BG 20, CG 2, Svy - none. Lost approx 38 bbls mud due to seepage last 24 hrs. Started nut-plug this AM. Svy: 1½° @ 5840'. MW 145, VIS 50, HTFL 1.6, PV 31, YP 24, 57% OIL, 25% SOL, PH 1040, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 10, CAKE 1. CC: \$863,952.
- 9/4/93 6627' Drlg 467'/18 hrs. Drlg, RS, drlg, work tight hole 6230-6275'. Drlg, circ, WL Svy, drlg - some tight conn w/jars. Circ & pump LCM sweep; spot same behind DC & DP. Short trip 17 stds @ 6527'; no drag - no fill; hole clean. Drlg - control drlg 20 hrs - no problems. Salt #19, BG 12-14, CG 1-2, dn time @ 6277 = 55 min. Short trip 13. Note: Est KOP @ 6711. Svy: ¾° @ 6356'. MW 14, VIS 48, HTFL 10.4, PV 30, YP 23, 57% OIL, 25% SOL, PH 1020, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 9, CAKE 2. CC: \$892,569.
- 9/5/93 6711' RD Schlumberger 84'/5 hrs. Drlg, RS, Drlg to 6711' KOP. C&C, short trip 10 stds; no drag - no fill. C&C for log. Tripping out (SLM) w/multi-shot to csg shoe @ 4995'. Retrieve multi-shot w/WL. Ran gyro thru DP on WL to 900'. Finish TOH (SLM), LD BHA. Change out wear bushing. RU Schlumberger and ran GR, Sonic Caliper log 6714' to surface. WLTD 6714', board 6711', SLM 6715'. RD Schlumberger. Salt #19, BG 12, CG 1-2, short trip 50 @ 6711'. Svy: 2¾° multi-shot @ 6711' S18W. MW 14, VIS 49, HTFL 10.6, PV 30, YP 22, 58% OIL, 25.2% SOL, PH 1000, ALK 5, LM 6.5, CL 196,000, CA 77/23, GELS 7, 10" 9, CAKE 2. CC: \$919,663.
- 9/6/93 6843' Slide drlg 128'/13 hrs. PU directional tools - BHA and HWDP. RD LD mach. TIH, replace bad DP rubbers. Circ & orient motor. Slide drlg 6715-6843', building angle. Clastic #19, BGG 20-30, CG 2-4, TG 63 after logging. Tops: Clastic #19 @ 6818'. Pick up wt 210,000, slack out wt 200,000. MW 14.2, VIS 52, HTFL 10.0, PV 32, YP 22, 58% OIL, 26.3% SOL, PH 990, ALK 5.4, LM 70, CL 187,000, CA 78/22, GELS 6, 10" 8, CAKE 2. CC: \$951,219.
- |                    |            |                  |  |
|--------------------|------------|------------------|--|
| <u>Drlg Breaks</u> | <u>MFP</u> | <u>Gas Units</u> |  |
| 6824-6828'         | 25-5-14    | 12-100-25        |  |
| 6830-6832'         | 18-5-15    | 25-136-30        |  |
- 9/7/93 6915' Drlg 72'/22½ hrs. Slide drlg 6843-6854', building angle. RS, slide drlg 6854-6858', building angle. Circ out gas 6858', max 9600, mud cut 14.2-12.6. Slide drlg 6858-6915', building angle. Now building md wt 15.3-15.6. Salt #20 @ 6899', BG 4640 w/15.3, CG 9280 @ 6885' w/14.9, FCD .4, pick up wt 210,000, slack out wt 200,000. MW 15.3, VIS 52, HTFL 9.6, PV 38, YP 24, 56% OIL, 30.5% SOL, PH 1060, ALK 6.5, LM 8.4, CL 187,000, CA 80/20, GELS 7, 10" 10, CAKE 2. CC: 9278,936.
- |                    |              |                  |   |
|--------------------|--------------|------------------|---|
| <u>Drlg Breaks</u> | <u>MFP</u>   | <u>Gas Units</u> |   |
| 6842-6848'         | 25-12-20     | 25-70-50         | SH blk sft carb.  |
| 6852-6864'         | 30/18-6-8/35 | 45-7000-5120     | SLTST lt gry-gry brn, vfxln sft dol.<br>TVD Clastic #19 = 6812' MD = 6816'. |
- 9/8/93 6966' Install wear bushing. Prep to TIH 51'/3 hrs. Slide drlg from 6917-6966'. C&C mud, raise wt to 16.5. Short trip 5 stds, hole free; short trip BGG 9600 U max. C&C mud, raise wt to 17.0 (mud cut from 16.5 to 14.5 after short trip). Short trip 5 stds, hole free; short trip gas 7360 U. C&C mud; mud, gas cut .3 lb/gal; BGG 2560 U. TOOH, LD 18 jts DP, remove DP rubbers, install wear bushing. Salt #20, 6899'. MW 17°, VIS 56, HTFL 10.4, PV 48, YP 28, 53% OIL, 36.9% SOL, PH 1040, LM 7.25, CL 196,000, CA 85/15, GELS 8, 10" 10, CAKE 2. CC: \$1,010,769.

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- 9/9/93 6966' TIH w/PDC and 2° X 1° directional assembly. Change BHA. Work BOPS. TIH. Could not get thru KOP @ 6715'. Circ out gas. Had intermittent flare of 15'. Orient tools. Slide ream 6709-6799'. Started taking wt, 167' off btm. Bit is in 19-22°/100 build. Circ out gas. TOOH. LD 1° motor. PU 2° X 1° motor to ream w/same assembly which drilled original hole. Cut drill line. Continue TIH hole 100' from KOP @ report time. MW 17.4, VIS 59, HTFL 10.8, PV 46, YP 24, 52% OIL, 37.9% SOL, PH 1080, ALK 5.6, LM 7.3, CL 206,000, CA 84/16, GELS 7, 10" 9, CAKE 2. CC: \$1,032,126.
- 9/10/93 6966' MU BHA #5 and TIH. TIH, W&R from 16,756' to 6802'. C&C mud. TOOH, LD BHA. PU hole opener w/2' bull nose and 6 pt, TIH. Attempt to get in hole w/wtr - no luck. C&C mud. TOOH, LD HO and 6 pt rmr. PU PT 2½° Motor and BHA and TIH. MW 17.5, VIS 64, HTFL 11, PV 49, YP 22, 50% OIL, 38.8% SOL, PH 1110, LM 7.0, CL 196,000, CA 82/18, GELS 7, 10" 10, CAKE 2. CC: \$1,056,242.
- 9/11/93 6832' 6828' TVD. Slide drill w/PDC bit & PT 2°x1° motor 29' /8 hrs. TIH, fill pipe @ 2100' and 5100'. Drlg from 6803-6819'. C&C hole. Pump pill. TOOH, LD motor, work BOPS, PU PT 2°x1° motor, PDC bit. TIH, fill pipe @ 2500' and 5100', orient motor. Slide drill from 6819-6832'. TVD 6827'. MW 17.6, VIS 74, HTFL 10.6, PV 55, YP 21, 52% OIL, 40% SOL, PH 1120, LM 62, CL 215,000, CA 85/15, GELS 7, 10" 10, CAKE 2. CC: \$1,083,471.
- 9/12/93 6911' 6899' TVD. Drlg 79' /24 hrs. Slide drlg sidetrack #1, MW 17.6 in/17.3 out, VIS 61, HTFL 10.6, PV 52, YP 23, 51% OIL, 38.5% SOL, PH 1040, LM 9, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,107,451.
- 9/13/93 7070' 7010' TVD. Drlg 159' /24 hrs. Slide drlg. MW 17.5, VIS 55, HTFL 10.2, PV 512, YP 24, 51% OIL, 39% SOL, 1060 PH, LM 9.3, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,128,155.
- 9/14/93 7125' Slide drill 55' /4½ hrs. Slide drlg to 7094'. Circ btm up, pump pill. TOOH, LD jt 6" DP. Jar out of hole from 6995 (48°) to 6893' (29°). Ream from 6893' to 7094'. Circ, mix and pump pill. TOOH, LD 12 jts 6" DP. Run leak off test to 18.5 equiv at csg shoe, bled off 10 psi in 6 min. PU 1° mud motor, TIH. W&R from 7067' to 7094'. Slide drlg. MW 17.7, VIS 72, HTFL 10, PV 58, YP 28, 51% OIL, 39% SOL, PH 1180, LM 9, CL 215,000, CA 86/14, GELS 8, 10" 12, CAKE 2. CC: \$1,152,510.
- 9/15/93 7257' C&C mud for trip and for motor 132' /6½ hrs. Drlg and rot from 7125-7257'. Pump pill, short trip 12 stds; 4th std tight. TIH 8 stds, hit bridge @ 6839'. Attempt work 1° mud motor thru bridge; hole sticky and tight; C&C. TOOH w/1° motor and LD. PU bit, 3 pt, XO and TIH to 6839'. Begin circ and W&R from 6839-7258'. C&C for short trip; short trip 5 stds - no tight spots. C&C mud. MW 17.8, VIS 61, HTFL 10.6, PV 58, YP 26, 51.5% OIL, 42% SOL, PH 1760, LM 9.0, CL 215,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,180,010.
- 9/16/93 7327' TIH w/1½° motor & MWD 70' /5 hrs. C&C, mix and pump pill. TOOH w/bit for motor. Change out BHA, LD 3 pt & bit, check blind rams and PU mud motor and MWD, change out stab, and align motor w/MWD. TIH w/1° motor and MWD and change out jars. W&R from 7214' to 7257'. Slide drlg from 7257-7289'. Drlg & rot from 7289-7327'. Circ btm up from top Kane Creek and mix pill and pump. TOOH for 1½° motor or change. Check blind rams and change motor and LD stab and align motor w/MWD. TIH w/1½° motor and MWD and fill DP @ 2500' and 5100'. MW 17.6, VIS 55, HTFL 10.2, PV 51, YP 23, 53% OIL, 38% SOL, PH 1320, LM 9.0, CL 215,000, CA 85/15, GELS 8, 10" 11, CAKE 2. CC: \$1,207,860.
- 9/17/93 7374' Slide drlg 47' /23 hrs. Slide drlg from 7327-7361'. Change hose, quick conn on std pipe, finish drlg recorder and visulogger. Slide drlg from 7361-7374'. MW 17.4, VIS 52, HTFL 11.0, PV 51, YP 20, 53% OIL, 38% SOL, PH 1450, LM 7.8, CL 200,000, CA 84/16, GELS 7, 10" 9, CAKE 2, ECD 17.9 lb/bbl. CC: \$1,230,743.

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- 9/18/93 7375' W&R to btm @ 7350' 1<sup>1</sup>/<sub>4</sub> hrs. Slide drlg from 7374-7375'. C&C, mix and pump pill. TOOH w/motor and bit — stuck @ 7321' and jar out of hole to 7118'. Finish TOOH w/motor and bit. Drag from 7118' to 7024' w/25,000 psi. LD motor and sperry sun, tool. PU 3 pt and 6 pt and TIH w/bit to shoe. Cut drlg line. Finish TIH w/bit to 7181'. W&R from 7181' to 7375'. Lost 10 bbls in seepage. MW 17.3, VIS 62, HTFL 11.6, PV 53, YP 28, 52% OIL, 36.8% SOL, PH 1460, LM 7.8, CL 200,000, CA 83/17, GELS 10, 10" 13, CAKE 2. CC: \$1,250,500.
- 9/19/93 7399' Slide drlg 24'/13 hrs. C&C, mix and pump pill. TOOH w/3 pt, 6 pt and bit. LD rmr, PU new motor and change bend, align w/MWD and make up MWD. TIH w/bit and motor. Begin circ and orient tool. Slide drlg from 7375-7399'. MW 17.4, VIS 59, HTFL 12.8, PV 52, YP 26, 53% OIL, 39% SOL, PH 1380, ALK 5.0, LM 6.5, CL 203,000, CA 85/15, GELS 7, 10" 12, CAKE 2. CC: \$1,278,367.
- 9/20/93 7413' Slide drlg @ 7413' 14'/11<sup>1</sup>/<sub>2</sub> hrs. Slide drlg from 7399-7408'. RS and check BOPS. Pump pill and TOOH w/bit and motor. Change bit, check blind rams. TIH w/bit and motor to 5070'. Fill pipe and check motor and MWD. TIH w/bit and motor to 6946'; hit bridge, attempt to turn motor — wouldn't go. W&R from 6946-7408'. Ream hard from 6946-7033' — still wouldn't go without pump. Slide drlg from 7408-7413'. MW 17.5, VIS 62, HTFL 11.2, PV 52, YP 28, 54% OIL, 39% SOL, PH 1400, ALK 5.0, LM 6.5, CL 200,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,330,876.
- 9/21/93 7433' Slide drlg @ 7433' 20'/8<sup>1</sup>/<sub>2</sub> hrs. Slide drlg from 7413-7423'. Circ, mix and pump pill. TOOH for 1° motor. Align MWD, change degree on motor and PU stab. Open blind rams and RS. TIH w/1° motor and bit; slips slipping in DP. WO DP slips from Vernal. TIH to 5074'. Fill pipe and check MWD and motor. TIH w/bit and motor, hit bridge @ 6839', orient motor and fall thru. Slide drlg from 7423-7433'. MW 17.6, VIS 58, HTFL 11.6, PV 50, YP 21, 57% OIL, 36.3% SOL, PH 1480, ALK 5.5, LM 7.1, CL 200,000, CA 89/11, GELS 7, 10" 10, CAKE 2, ECD .4 lb/bbl. CC: \$1,351,041.
- 9/22/93 7530' Slide drlg 97'/23<sup>1</sup>/<sub>2</sub> hrs. Slide drlg from 7433-7445'. RS. Slide drlg from 7445-7450'. Rotate drlg from 7450-7528'. Slide drlg from 7528-7530'. Cane Creek, BGG 1500/1600, CG 3080/7509, no shows. String wts: pickup 210,000#, slack-off 185,000#, rotating 195,000#; torque 115 amps. MW 17.4, VIS 54, HTFL 12.0, PV 48, YP 22, 57% OIL, 37% SOL, PH 1500, ALK 6.0, LM 7.8, CL 220,000, CA 89/11, GELS 8, 10" 13, CAKE 2. Projected Svy @ 7530': inclination 82°, direction 335.3°, TVD 7168.18', vertical section 474.42', coordinates 423.00'N 214.82'W, DLS 1.40°/100'. CC: \$1,380,688.
- 9/23/93 7581' Slide drlg 51'/23<sup>1</sup>/<sub>2</sub> hrs. Slide drlg 7530-7540'. RS. Slide drlg 7540-7581'. Cane Creek BG 1400/1600, CG 2320/7571, down time pump 1920/7565, PU 210,000, SO 185,000. NOTE: Analine point of diesel is 152°. MW 17.5, VIS 55, HTFL 11.4, PV 50, YP 28, 55% OIL, 39% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 89/11, GELS 7, 10" 12, CAKE 2. See attached svy report for svys. CC: \$1,401,334.
- 9/24/93 7,603' C&C for short trip 22'/9 hrs. Slide drlg 7581-7586'. Rotate drlg 7586-7603'. Mix and pump slug. POOH. LD BHA and tools. PU new BHA, TIH to 7323'. W&R 7323-7603. C&C for short trip. A-5 Anydrite @ 7592' MP, BG 1040, CG @ 7571' - 2320, down time 2240, trip 8800' behind gas buster w/20' intermitted flare. NOTE: did not touch anything, TIH to 7323'; #1 pump down. See attached svy report for svys. MW 17.6, VIS 59, HTFL 11.6, PV 55, YP 26, 53% OIL, 40% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,421,921.
- 9/25/93 7603' TIH w/7<sup>5</sup>/<sub>8</sub>" liner @ 6000'. Short trip 11 stds - ok. C&C for csg. Short trip - ok. C&C for csg. Mix and pump slug - drop rabbit. POOH SLM, DL BHA. RU csg crew. PU and ran 7<sup>5</sup>/<sub>8</sub>" liner, 62 jts 39# S-95 Hydril 521 and liner hanger w/pkr. RD csg tools. TIH w/liner, SLM; fill every 9 stds. Shoe now @ 6000'. MW 17.6, VIS 59, HTFL 11.7, PV 58, YP 23, 54% OIL, 40% SOL, PH 1600, ALK 5.5, LM 7.1, CL 190,000, CA 88/12, GELS 8, 10" 15, CAKE 2. CC: \$1,499,343.

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- 9/26/93 7603' Rig repair - #1 pump. Finish TIH w/7½" liner. RU Howco. Circ out gas. Hang liner and cmt by Howco w/30 bbk SAM-4 spacer @ 18#, 175 sx poz scavenger @ 14#, 470 sx Premium AG-250 w/40# Hidense and .5% Halad 322 @ 19# and .2% CBL. Disp w/20 bbbs SAM-4 spacer and 170 bbbs invert mud @ 17.6#. Bump plug w/1400 psi @ 11:46 AM, 9/25/93. Float held ok; had good circ thru job. Reversed out 8 bbbs cmt and 30 bbbs scavenger. Set pkr, PU and circ (reverse), press test pkr to 1000 psi - ok. RD Howco. TOOH 37 stds; TIH w/HWDP. RU LD mach and LD HWDP and excess DP. MW 17.7, VIS 62, HTFL 10.6, PV 59, YP 27, 55% OIL, 40% SOL, PH 1530, ALK 5.0, LM 6.5, CL 190,000, CA 90/10, GELS 9, 10" 15, CAKE 2. CC: \$1,608,126.
- 9/27/93 7603' TIH w/6½" bit to clean out liner. Change out pump #1. Change top set of pipe rams to variable. Test BOPS's and manifold variable rams on 4" and 5" DP to 10,000 psi, Hydril on 4" and 5" to 2500 psi, upper and lower kelly valves and relayed equipment to 10,000 psi. Change out tongs and RU floor to run 4" DP. PU BHA and SLM, TIH. MW 17.7, VIS 69, HTFL 10.8, PV 57, YP 27, 55% OIL, 40% SOL, PH 1500, ALK 5.0, LM 5.6, CL 190,000, CA 90/10, GELS 8, 10" 14, CAKE 2. CC: \$1,622,434.
- 9/28/93 7606' Drlg new formation 3' 3/4 hrs. RD T&M - change out elevators and tongs. Finish TIH w/5" DP and tag top of liner @ 4765'. Drlg - clean out top of liner. Press test csg and liner to 1065 psi; lost 15 psi in 15 min (17.6). TIH and tag up @ 7505'; had 1' cmt on top of landing collar. Drlg landing collar and float. Drlg cmt and shoe; cmt drilled @ 20'/hr. Drlg new formation. BG 26, 50% anhydrate, 50% cmt. MW 16.0, VIS 53, HTFL 9.6, PV 35, YP 21, 58% OIL, 34% SOL, PH 1310, ALK 5.5, LM 7.1, CL 196,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,649,797.
- 9/29/93 7714' Drlg 108'/11½ hrs. Drlg, C&C mud. Run equiv mud test 16 ppg to 18.5 ppg, 933 psi. TOOH, change BHA, align motor w/MWD. TIH, break circ. Wash to btm, break in bit. Slide drlg from 7606-7616'. Circ btms up. Slide drlg from 7616-7620'. Drlg from 7620-7683'. Circ btms up. Slide drlg from 7683-7710'. Drlg from 7710-7714'. Avg 4'/hr sliding; 10'/hr rotating. See attached svy report for svys. MW 15.9, VIS 49, HTFL 9.4, PV 31, YP 19, 60% OIL, 33% SOL, PH 1340, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 7, 10" 10, CAKE 2. CC: \$1,705,735.
- 9/30/93 7920' Drlg 206'/22½ hrs. Slide drill from 7714-7745'. RS. Slide drill from 7745-7748'. Rotate drill from 7748-7755'. Circ btms up. Slide drill from 7755-7920'. BGG 22, B5 - silt, 100% siltstone. MW 15.9, VIS 48, HTFL 10.8, PV 30, YP 20, 59% OIL, 32% SOL, PH 1360, ALK 5.2, LM 7.0, CL 182,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,726,879.
- 10/1/93 8194' Drlg 274'/23½ hrs. Slide drill from 7920-7961'. RS. Slide drill from 7961-8025'. Rotate drill from 8025-8055'. Slide drill from 8055-8100'. Rotate drill from 8100-8105'. Slide drill from 8105-8129'. Rotate drill from 8129'. Mud losses of 5-10 lbs @ 7818', 7873', 7990', 8080'. MW 15.8, VIS 49, HTFL 11.4, PV 37, YP 21, 59% OIL, 32% SOL, PH 1440, ALK 5, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,746,994.
- 10/2/93 8370' MD, 7268' TVD Rotate drill 176'/18½ hrs. Slide drill from 8194-8242'. Circ btms up. Short trip 11 stds. Slide drill from 8242-8256'. Rotate drill from 8256-8266'. Slide drill from 8266-8273'. RS. Rotate drill from 8273-8278'. Slide drill from 8278-8322'. Rotate drill from 8322-8335'. Circ samples, WOO. Rotate drill from 8335-8365'. Circ btms up. Rotate drill from 8365-8370'. BGG 20, SH dk grn - blk carb. MW 15.5, VIS 47, HTFL 12, PV 36, YP 22, 60% OIL, 31% SOL, PH 1440, ALK 4.7, LM 6.1, CL 177,000, CA 87/13, GELS 7-2, 10" 11, CAKE 2. CC: \$1,770,645.

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- 10/3/93 8469' Drlg 99'/14 hrs. Rotate drill from 8370-8397'. RS. Rotate drill from 8397-8417'. Slide drill from 8417-8421'. Mix and pump pill. TOOH. Shim motor to 1½°; align motor. TIH, fill pipe @ 4091'. W&R 32' to btm. Slide drill from 8421-8425'. Remove and replace blown-up vibrating hose on mud line under sub. Drlg. MW 15.5, VIS 49, HTFL 10.2, PV 35, YP 21, 61% OIL, 32% SOL, PH 1460, ALK 5.3, LM 6.9, CL 191,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: 1,791,039.
- 10/4/93 8534' TIH w/1° PT motor 65'/14 hrs. Slide drill from 8469-8534'. Circ btm up. Pump pill. TOOH, LD 21 jts 5" DP. Change out motor, align same. Check BOPS. TIH, PU 21 jts 4" DP. Fill pipe @ 4850'. MW 15.5, VIS 52, HTFL 10, PV 37, YP 21, 61% OIL, 31% SOL, PH 1440, ALK 5.5, LM 7.1, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,816,328.
- 10/5/93 8683' Rotate drlg 149'/21 hrs. TIH. Slide drlg from 8535-8552'. Rotate drlg from 8552-8557'. RS. Rotate drlg from 8557-8560'. Circ btms up. Rotate drlg from 8560-8588'. Slide drlg from 8642-8650'. Slide drlg from 8650-8659'. Rotate drlg from 8659-8683'. MW 15.5, VIS 50, HTFL 9.8, PV 34, YP 21, 60% OIL, 32% SOL, PH 1460, ALK 5.0, LM 6.5, CL 178,000, CA 87/13, GELS 7, 10" 11, CAKE 2. CC: \$1,835,290.
- 10/6/93 8534' TVD 7263'. Sidetracking and time drlg @ 8534' 56'/19 hrs. Rotate drlg from 8683-8712'. RS. Slide drlg from 8712-8729'. Circ btms up. Pump pill, LD 6 jts DP, short trip to shoe. WOO & circ. Ream from 8524-8529' and start sidetracking. Sidetracking and time drlg from 8524-8534'. MW 15.6, VIS 50, HTFL 9.8, PV 32, YP 21, 59% OIL, 32.1% SOL, PH 1420, ALK 4.8, LM 6.2, CL 182,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,854,175.
- 10/7/93 8641' 7259' TVD. Slide drlg @ 8641' 107'/23½ hrs. Sidetracking drlg from 8534-8556'. RS. Slide drlg from 8556-8641'. Lost 20 bbls in seepage. MW 15.5, VIS 51, HTFL 9.6, PV 34, YP 20, 60% OIL, 32% SOL, PH 1420, ALK 5.2, LM 6.7, CL 196,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,886,128.
- 10/8/93 8800' 7262.78' TVD. Rotate drlg @ 8800' 159'/23½ hrs. Rotate & drlg from 8641-8712'. RS. Rotate & drlg from 8712-8717'. Slide drlg from 8717-8721'. Rotate & drlg from 8721-8729'. Slide drlg from 8729-8752'. Rotate & drlg from 8752-8800'. Lost 28 bbls in seepage. MW 15.5+, VIS 51, HTFL 9.4, PV 35, YP 20, 60% OIL, 31.1% SOL, PH 1420, ALK 5.0, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 11, CAKE 2. CC: \$1,905,952.
- 10/9/93 8935' 7277.63' TVD. Rotate drlg @ 8935' 135'/22½ hrs. Slide drlg from 8800-8836'. Circ btms up for samples. RS and check BOPS. Rotate drlg from 8836-8848'. Slide drlg from 8848-8899'. Rotate drlg from 8899-8935'. Lost 5 bbls in seepage. MW 15.5, VIS 53, HTFL 9.6, PV 35, YP 20, 61% OIL, 31.2% SOL, PH 1460, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: \$1,924,879.
- 10/10/93 9070' 7298.23' TVD. Rotate drlg @ 9070' 135'/20½ hrs. Rotate drlg from 8935-8943'. Slide drlg from 8943-8962'. Pump pill. Short trip 22 stds and 18 stds in orient tool face and finish TIH 4 stds. Rotate drlg from 8962-8992'. RS and check BOPS. Slide drlg from 8992-9054'. Rotate drlg from 9054-9070'. Lost 10 bbls in seepage. MW 15.6, VIS 53, HTFL 9.4, PV 36, YP 20, 59% OIL, 32% SOL, PH 1520, ALK 4.9, LM 6.3, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,949,076.
- 10/11/93 9191' 7319.62' TVD. Slide drlg @ 9191' 121'/24 hrs. Rotate drlg from 9070-9077'. Slide drlg from 9077'. MW 15.5, VIS 54, HTFL 9.4, PV 39, YP 22, 58% OIL, 31.2% SOL, PH 1500, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,968,044.
- 10/12/93 9309' 7355.4' TVD. Slide drlg @ 9309' 118'/24 hrs. Slide drlg from 9191-9390'. MW 15.5, VIS 55, HTFL 9.0, PV 40, YP 22, 58% OIL, 32% SOL, PH 1495, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,996,128.

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- 10/13/93 9002' Sidetrack @ 8987'; now slide drlg @ 9002' 15'/20½ hrs. Slide drlg 9309-9315'. Rot drlg 9315-9351'. RS, work BOPS. Pump pill for sidetrack @ 8987'. POOH 11 jts to 8987'. Ream for sidetrack 8987-8992'. Time drlg @ 6" HR 8987-8990' slide. Time drlg @ 1' HR 8990-9000' slide. Time drlg @ 2' HR 9000-9002' slide. B-5 silt/B-4 SH (contact), BGG 5, CG 0, TG 0. MW 15.5, VIS 52, HTFL 9.0, PV 37, YP 21, 58% OIL, 32% SOL, PH 1580, ALK 5.5, LM 7.1, CL 168,000, CA 84/16, GELS 7, 10" 13, CAKE 2. CC: \$2,016,420.
- 10/14/93 9003' Time drlg (slide) for sidetrack @ 9001' 2'/3½ hrs. Sidetrack drlg from 9002-9008' @ 2 FPH. Sidetrack drlg from 9008-9018' @ 3 FPH, could not get sidetracked. RS, work BOPS. C&C, build slug. Pump pill & TOOH. Change out motor from 1° to 1½°; align same. Install MWD tool. TIH to 4747', fill pipe. Cut drlg line. TIH to 8500'. Orient tool face. TIH, tag bridge @ 8625'. W&R 8625-8670'. Finish TIH to 8996'. Orient tool face and ream from 8996-8670'. Time drlg (slide) for sidetrack @ 9001'. BGG 4-6, CG 0, TG @ 9018' 22. MW 15.6+, VIS 55, HTFL 9.2, PV 38, YP 23, 57% OIL, 33% SOL, PH 1610, ALK 5.0, LM 6.5, CL 165,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,052,375.
- 10/15/93 9011' Prep to screw onto fish 8'/11½ hrs. Slide drlg for sidetrack from 9003-9009' @ 6"-1'/hr. RS. Slide drlg for sidetrack from 9009-9011' @ 1'/hr. Lost 800 psi, circ mix pill and slug pipe. TOOH, change out jars and MWD tool. Left bit and btm 4' of mud motor and 10.7' of rotor in hole. PU MWD and align same w/mud motor pulled; will attempt to screw back onto fish. TIH, fill pipe @ 4700'. Install rot head, prep to try and screw onto fish. MW 15.6, VIS 51, HTFL 8.8, PV 34, YP 20, 57% OIL, 33% SOL, PH 1680, ALK 4.8, LM 6.2, CL 162,000, CA 84/16, GELS 7, 10" 12, CAKE 2. CC: \$2,072,887.
- 10/16/93 9011' TIH w/1½° bit and motor to finish sidetrack. Attempt to screw back onto fish. TOOH - no rec. PU overshot and make up fishing tools. RS, work BOPS. TIH w/fishing tools. LD 3 jts 4" DP; PU 3 jts 4" DP. Fish for bit and motor part. TOOH - rec all of fish, LD same. PU BHA #20, motor and MWD. Align motor and MWD. PU kelly and test ok. TIH w/1½° bit and motor. MW 15.9, VIS 58, HTFL 8.8, PV 40, YP 26, 57% OIL, 34% SOL, PH 1520, ALK 4.8, LM 6.2, CL 160,000, CA 85/15, GELS 9, 10" 18, CAKE 2. CC: \$2,105,568.
- 10/17/93 9019' POOH w/fish (bit, lower section of mud motor and rotor) 8'/5½ hrs. Finish TIH w/bit, 1½° mud motor and BHA. Time drlg for sidetrack; slide from 9011-9019'. RS, work BOPS. Lost 700 psi; attempt to screw back @ separation. Pump slug and POOH left btm 3' of mud motor, bit and rotor in hole. WO fishing tools. Make up fishing tools - overshot w/3¼" basket grapple. TIH w/same. Engage fish @ 9016'. Build slug; pump pill and POOH w/fish. MW 15.8, VIS 63, HTFL 8.8, PV 42, YP 26, 58% OIL, 32% SOL, PH 1600, ALK 4.5, LM 5.8, CL 165,000, CA 84/16, GELS 8, 10" 19, CAKE 2. CC: \$2,125,934.
- 10/18/93 9024' Changing out mud motor and stabilizer; thread (lock stabilizer) 5'/2½ hrs. Finish POOH - rec all of fish. LD fish; break down and lay out fishing tools. RS, check BOPS. PU motor and align MWD; test ok. TIH, PU 12 jts 4" SHDP. Circ and work pipe to clean up any junk on btm. Slide drlg from 9019-9024'. MWD started acting up. Mix and pump pill. POOH, stabilizer on motor had backed half way off, causing bearings to fall; motor locked up. Change out MWD and check bit - ok. Change out mud motor and stabilizer - thread (lock stabilizer). MW 15.9, VIS 57, HTFL 9.0, PV 40, YP 23, 56% OIL, 33% SOL, PH 1580, ALK 4.0, LM 5.2, CL 160,000, CA 82/18; GELS 8, 10" 15, CAKE 2. CC: \$2,148,896.
- 10/19/93 9086' TOOH to find PSI loss 62'/12 hrs. Align mud motor with MWD and test - ok. TIH, RS. TIH to 8917', fill pipe @ 5200'. W&R 8917-9024'. Slide drlg 9024-9030'. Rot drlg 9030-9035'. Slide drlg 9035-9064'. Rot drlg 9064-9086'. PU to make conn; lost 800 psi, slack off and touch btm 10' high. Circ and clean hole while building pill. Pump pill. TOOH to find PSI loss. B-4 silt, BGG 16, CG 0, TG @ 9024' 17. MW 15.9, VIS 56, HTFL 9.0, PV 38, YP 24, 55.5% OIL, 33.5% SOL, PH 1600, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 7, 10" 14, CAKE 2. CC: \$2,181,398.

COASTAL OIL & GAS CORPORATION  
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TITE HOLE

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- 10/20/93 9086' WO spear to fish 5 3/4" OD, WP ext and OS. TOOH for press loss. Motor backed off @ shim connection. RS, work pipe and blind rams. Cut drlg line. WO fishing tools. PU 6 1/8" OS w/5" grapple, 5 3/4" WP ext, bumper sub jars and TIH. Tag obstruction @ 9013'. Circ & work OS to top fish @ 9084', work fish. Mix and pump pill. TOOH, left 5 3/4" OD WP ext & 6 1/8" OS in hole. Backed off WP, top sub & 4' ext. 17.43' OS & WP left in hole. Have 6' to spear into. WO spear. MW 16.4, VIS 63, HTFL 8.6, PV 43, YP 24, 55% OIL, 34.3% SOL, PH 1560, ALK 3.8, LM 4.9, CL 125,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,201,591.
- 10/21/93 8900' MD, 7272' TVD Sidetrack #4, time drlg 6"/hr 3 7/7 hrs. WOO. RS. WOO. PU bit, 1.4° D475 Drilex motor, align motor w/MWD. TIH to 4700'. Fill pipe, orient and test tools. TIH. Ream and start sidetracking. Slide time drill @ 6"/hr. Cane Creek B-4 Silt, 100% siltstone, BGG 15, TG 32. MW 16, VIS 60, HTFL 9.6, PV 41, YP 21, 57% OIL, 33.1% SOL, PH 1520, ALK 3.9, LM 5, CL 159,000, CA 85/15, GELS 8, 10" 13, CAKE 2. CC: \$2,259,324.
- 10/22/93 8912' TIH 12 1/4 hrs. Time drill. RS. Time drill to 8912'. PU, check sidetrack. Motor stalling; could not get started again. Mix and pump pill. TOOH, change out Drilex motor. PU 1.3° D475 Drilex motor. TIH, orient motor and MWD, TIH. Cane Creek B-4 Silt, 50% siltstone, 50% SH, BGG 8-12. MW 15.5, VIS 51, HTFL 9.4, PV 36, YP 20, 58% OIL, 31.1% SOL, PH 1400, ALK 52, LM 6.73, CL 170,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,287,202.
- 10/23/93 8924', 7276.46' TVD Drlg 12 1/2 hrs. TIH. Orient motor, W&R 24' to btm. Time drlg, mud motor stalling. Pump pill. TOOH, LD Drilex motor. PU PT, 1 1/4° motor, align w/MWD, test motor. TIH, fill DP, orient tool. TIH, time drlg 8912-8924' @ 8918', motor stalling as if in frac or formation change. B-4 Silt/B-4 SH contact, 50% siltstone, 50% SH w/anhy and salt fill frac, BGG 12-16, TG 12. MW 15.5, VIS 59, HTFL 10.2, PV 42, YP 19, 56% OIL, 33% SOL, PH 1520, ALK 48, LM 6.2, CL 192,000, CA 82-18, GELS 7, 10" 3, CAKE 2. CC: \$2,318,858.
- 10/24/93 9038', 7302' TVD Rotate drill 114 1/2 hrs. Time drlg from 8929'. RS. Slide drlg from 8929-8970'. Circ btms up. Pump pill. TOOH, change out mud motors, align motor w/MWD, Baker-lock stb on motor. Work BOPS. TIH. Fill pipe @ 4995'. Orient tools. TIH, slide drlg from 8970-8991'. Rotate drill. B-5 Silt/B-5 SH boundary, 100% siltstone, BGG 30-40, TG 20 @ 8970'. MW 15.6, VIS 54, HTFL 10.2, PV 36, YP 20, 58% OIL, 32% SOL, PH 1560, ALK 48, LM 62, CL 150,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,341,609.
- 10/25/93 9272', 7366' TVD Drlg 234 1/2 hrs. Rotate drill 9038-9054'. Slide drill 9054-9084'. RS, Rotate drill 9084-9194'. Slide drill 9194-9249'. Rotate drill 9249-9272'. Lost approx 16 bbls mud to seepage last 24 hrs. MW 15.5, VIS 52, HTFL 9.6, PV 35, YP 19, 58% OIL, 32% SOL, PH 1440, ALK 52, LM 6.7, CL 142,000, CA 84-16, GELS 7, 10" 11, CAKE 2. CC: \$2,361,319.
- 10/26/93 9332' TIH 60 1/11 hrs. Rotate drill from 9272-9283'. Slide drill from 9283-9301'. RS. Slide drill from 9301-9328'. Rotate drill from 9328-9332'. Lost pump press after conn @ 9332', 200 PSI @ 108 SPM to 2400 PSI @ 110 SPM, set back down on btm w/10,000#. Turn to right; got press increase. Mix and pump pill. TOOH, LD motor. PU new motor, weld straps on conn of new motor and Baker-lock rest of conn, orient motor w/MWD, TIH. Lost approx 19 bbls mud to seepage last 24 hrs. MW 15.5, VIS 55, HTFL 9.4, PV 37, YP 21, 58% OIL, 32% SOL, PH 1540, ALK 5.1, LM 6.6, CL 133,000, CA 84-16, GELS 8, 10" 13, CAKE 2. CC: \$2,384,750.
- 10/27/93 9424' TIH w/setting tool and retainer to 7479.61' 92 1/6 hrs. TIH w/motor, MWD, and bit. Fill DP and orient motor @ 8525'. Install rot head and TIH. Rotate drlg from 9332-9394'. RS. Rotate drlg from 9394-9406'. Slide drlg from 9406-9424'. Pump pill and TOOH 19 stds. C&C. TOOH and SLM out, LD 2 jts & HW DP and jars. LD motor, 2 knobby moneil and MWD moneil and all XO. PU setting tool and retainer and TIH w/DP to 7479.61'. MW 16.0, VIS 65, HTFL 9.6, PV 42, YP 21, 57% OIL, 34% SOL, PH 1500, ALK 5.2, LM 6.7, CL 159,000, CA 85-15, GELS 8, 10" 14, CAKE 2. CC: \$2,408,023.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

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10/28/93 9424' Press testing BOPS. WOO. Set retainer @ 7563'. RU Halliburton, test csg and retainer 500 psi - ok and DP 1000 psi - ok. Injection rate 1½ bbls min, 2600 psi cmt w/125 sx prem H w/.1% HR-4, 100 sx below retained and 75 sx on top. LD 3 jts DP. Reverse out, no cmt and RD Halliburton. RU LD mech, LDDP and break kelly and LD 4" HWDP. Change out lower pipe rams. LD Homco tools and load out 4" DP and 4" HWDP. WO 2¾" tbg. Press testing BOPS. MW 16.3, VIS 68, HTFL 9.8, PV 44, YP 22, 54% OIL, 35% SOL, PH 1560, ALK 5.1, LM 6.6, CL 142,000, CA 82-18, GELS 8, 10" 13, CAKE 2. CC: \$2,438,670. FINAL DRILLING REPORT.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1

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Kane Springs Unit

Grand County, UT

Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{3}{8}$ " @ 823'; 10 $\frac{3}{4}$ " @ 4995'

7 $\frac{1}{8}$ " @ 7600'

CWC(M\$): 2,585.0

- 10/29/93 9424' Running GR/CBL w/Halliburton. Finish press testing BOPS. Tests tbg rams, blind rams 5000 psi 10 min - ok, hyd 2500 psi 10 min - ok. PU 237 jts 2 $\frac{7}{8}$ " tbg 6.5# N-80 EUE, total 7411.62'. Disp hole w/300 bbls pit wtr and 575 bbls 3% KCL wtr wt 8.5. TOOH w/tbg for logs. ND Grant rot head and NU 13 $\frac{3}{8}$ " XO flange for lubricator. RU Halliburton and run GR and CBL w/2500 psi. CC: \$2,467,797.
- 10/30/93 9424' Making up BHA, 6 $\frac{1}{2}$ " mill and csg scraper. ND XO flange for lubricator. Put new ring w/teflon tape and NU XO flange for lubricator. RU loggers and test XO flange 3400 psi. Run GR-CBL w/3400 psi to 7025'. Log back to 1650', top cmt 1860. RD loggers and ND XO flange. PU 4' SPF gun, sub SX, 2 $\frac{7}{8}$ " jts, P/nipple, 2 $\frac{7}{8}$ " jts, r/nipple, 2 $\frac{7}{8}$ " jts, XO, sub, Baker pkr, setting tool, sub, 2 $\frac{7}{8}$ " jts, subj. TIH w/tbg, pkr, and guns. Pkr wouldn't go through liner hanger. TOOH w/pkr, guns and LD 2 jts. LD pkr, stand back perf gun. WO mill csg scraper and mill. Make up mill and csg scraper. CC: \$2,476,763.
- 10/31/93 9424' TIH w/stinger and tbg. TIH w/tbg, mill and scraper top liner. PU power swivel. Mill out linr top w/6 $\frac{1}{2}$ " mill. LD power swivel. TIH w/tbg, mill and scraper to 6843'. TOOH w/tbg, mill and scraper. PU perf guns and pkr tools. TIH w/tbg, pkr and perf gun. Run GR & CL w/Halliburton and tie in w/R A Marker. RIH w/1 std tbg and PU 1 jt tbg and 8' pup. Run GR and CL w/Halliburton and tie in w/R. A. Marker. Drop ball and press up and set pkr @ 6710' w/2000 psi and 15,000# wt on pkr. TOOH w/setting tool and LD w/1 hr time change fall back. PU stinger, 1 jt 2 $\frac{7}{8}$ " tbg and f/nipple and 71 stds. CC: \$2,517,574.
- 11/1/93 9424' Flow testing well and swabbing well 3000'. PU pup and 1 jt 2 $\frac{7}{8}$ " tbg and install tbg donut, set w/12,000# wt on seal assembly and test 2000 psi 5 min - ok. ND BOPS and NU 10,000# XO, 5000# tree and test tree and line to separate to 5000 psi - ok and retrieve 2-way BP valve. Swab well 3000', swab cup stacked out, run w/swab mandrel - no go, stacked out. Run in w/sinker bars 6000'. Drop bar and five perf off. Flow test well - no press or fluid to surface. Flow testing well and swabbing well dn 3000'; total 13 run, 25.3 bbls wtr to surface w/weak blow. CC: \$2,563,006.

# COASTAL OIL & GAS

KANE SPRINGS #16-1  
 GRAND COUNTY UTAH  
 ACTUAL VS PROPOSED

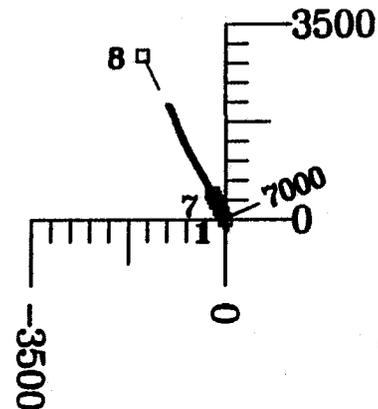
*well file*

HORIZONTAL SCALE:

1"=3500'

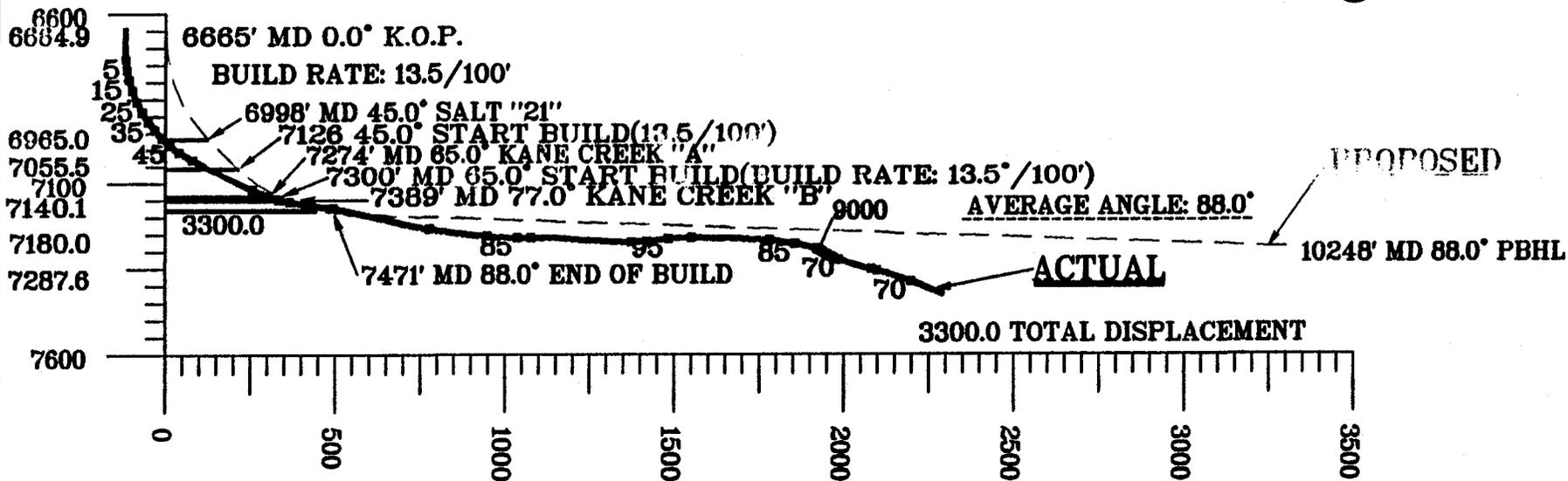
Cobb Horizontal Technology  
 & Directional Services

SURFACE LOCATION:  
 3920' FSL & 1960' FWL  
 BOTTOM HOLE LOCATION:  
 5978' FSL & 949' FWL  
 7426' TVD 9392' MD



VERTICAL SCALE:

1"=500'



PLANE OF VERT SECTn 333.13°  
 PLOT DATE 07-23-1993

### WELL PROPOSAL

Sec	MD	TVD	VS	INC	DIR	LAT	DEP	TGT
1	6664.9	6664.9	0.0	0.0	333.13	0.0	0.0	
2	6998.2	6965.0	124.3	45.0	333.13	110.9	-56.2	
3	7126.2	7055.5	214.8	45.0	333.13	191.6	-97.1	
4	7274.4	7140.1	335.6	65.0	333.13	299.3	-151.7	
5	7300.6	7151.1	359.3	65.0	333.13	320.6	-162.4	
6	7389.5	7180.0	443.2	77.0	333.13	395.4	-200.3	
7	7471.0	7190.7	523.9	88.0	333.13	467.3	-236.8	
8	10248.8	7287.6	3300.0	88.0	333.13	2943.8	-1491.5	



: COASTAL OIL & GAS  
: KANE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)  
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COBB DIRECTIONAL DRILLING \ HORIZONTAL TECHNOLOGY

MASTAL OIL & GAS  
 SAGE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)

MINIMUM CURVATURE CALCULATIONS

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MEASURED DEPTH (Ft)	INC. Deg	DIR.		TVD (Ft)	VERT. (Ft)	N / S		E / W		LEASE LINE		CLOSURE		DLEG SEV. /100(Ft)
		Dir	Dir			(Ft)	(Ft)	(Ft)	(Ft)	FSL (Ft)	FWL (Ft)	AZIMUTH Deg Min	DIST (Ft)	
6649.0	3.00	S	1.00 E	6646.8	-118.5	-128.2	9.0	3791.8	1969.0	S	4 2 E	129	0.00	
6650.0	2.93	S	3.02 W	6647.8	-118.5	-128.3	9.0	3791.7	1969.0	S	4 2 E	129	21.65	
6700.0	1.48	N	36.85 W	6697.8	-118.5	-128.5	8.6	3791.5	1968.6	S	3 49 E	129	7.80	
6750.0	7.14	N	13.46 W	6747.6	-115.2	-125.3	7.6	3794.7	1967.6	S	3 28 E	126	12.74	
6800.0	15.85	N	11.47 W	6796.6	-105.7	-115.7	5.6	3804.3	1965.6	S	2 45 E	116	17.44	
6850.0	23.00	N	14.95 W	6843.6	-89.3	-99.3	1.6	3820.7	1961.6	S	0 54 E	99	14.56	
6900.0	30.25	N	17.61 W	6888.3	-67.5	-78.0	-4.7	3842.0	1955.3	S	3 26 W	78	14.75	
6950.0	37.94	N	19.08 W	6929.6	-39.7	-51.4	-13.6	3868.6	1946.4	S	14 50 W	53	15.47	
7000.0	45.70	N	20.82 W	6966.8	-6.7	-20.1	-25.0	3899.9	1935.0	S	51 8 W	32	15.72	
7050.0	53.78	N	21.57 W	6999.2	31.1	15.3	-38.7	3935.3	1921.3	N	68 27 W	42	16.20	
7100.0	59.16	N	22.37 W	7025.1	73.7	54.8	-54.9	3974.8	1905.1	N	45 6 W	78	10.84	
7150.0	63.96	N	23.10 W	7050.5	116.6	94.5	-71.4	4014.5	1888.6	N	37 3 W	118	9.70	
7200.0	63.63	N	23.03 W	7072.6	161.3	135.8	-88.9	4055.8	1871.1	N	33 14 W	162	0.67	
7250.0	63.73	N	23.70 W	7094.8	206.0	176.9	-106.7	4096.9	1853.3	N	31 6 W	207	1.22	
7300.0	64.91	N	22.91 W	7116.5	251.0	218.2	-124.6	4138.2	1835.4	N	29 44 W	251	2.76	
7350.0	69.05	N	22.80 W	7136.2	296.8	260.6	-142.5	4180.6	1817.5	N	28 41 W	297	8.28	
7400.0	77.03	N	23.11 W	7151.1	344.4	304.5	-161.0	4224.5	1799.0	N	27 52 W	344	15.98	
7450.0	82.24	N	24.36 W	7159.7	393.5	349.6	-180.7	4269.6	1779.3	N	27 21 W	394	10.70	
7500.0	82.81	N	24.50 W	7166.0	443.1	394.7	-201.4	4314.7	1758.6	N	27 2 W	443	1.18	
7550.0	80.00	N	24.98 W	7173.1	492.5	439.6	-222.0	4359.6	1738.0	N	26 47 W	493	5.71	
7600.0	77.58	N	26.41 W	7183.1	541.5	483.8	-243.2	4403.8	1716.8	N	26 42 W	541	5.58	
7650.0	77.80	N	27.50 W	7193.7	590.3	527.3	-265.4	4447.3	1694.6	N	26 43 W	590	2.18	
7700.0	76.95	N	28.63 W	7204.6	639.1	570.3	-288.4	4490.3	1671.6	N	26 50 W	639	2.79	
7750.0	77.16	N	28.77 W	7215.9	687.8	613.0	-311.9	4533.0	1648.1	N	26 58 W	688	0.51	
7800.0	78.64	N	28.76 W	7226.4	736.7	655.9	-335.3	4575.9	1624.7	N	27 5 W	737	2.96	
7850.0	80.64	N	28.90 W	7235.5	785.8	699.0	-359.1	4619.0	1600.9	N	27 11 W	786	4.01	
7900.0	82.18	N	29.82 W	7242.8	835.2	742.1	-383.2	4662.1	1576.8	N	27 19 W	835	3.57	
7950.0	83.24	N	30.14 W	7249.0	884.8	785.1	-408.0	4705.1	1552.0	N	27 28 W	885	2.22	
8000.0	84.34	N	30.56 W	7254.5	934.4	828.0	-433.1	4748.0	1526.9	N	27 37 W	934	2.35	
8050.0	86.57	N	30.88 W	7258.5	984.1	870.8	-458.6	4790.8	1501.4	N	27 46 W	984	4.52	

COBB DIRECTIONAL DRILLING \ HORIZONTAL TECHNOLOGY

MASTAL OIL & GAS  
 SENECA SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)

MINIMUM CURVATURE CALCULATIONS

21-DEC-93 Page 2

MEASURED DEPTH (Ft)	INC. Deg	DIR. Deg		TVD (Ft)	VERT. (Ft)	N / S		E / W		LEASE LINE		CLOSURE		DLEG SEV. /100(Ft)
						(Ft)	(Ft)	(Ft)	(Ft)	FSL (Ft)	FWL (Ft)	AZIMUTH Deg Min	DIST (Ft)	
8100.0	89.87	N	30.95 W	7259.9	1033.9	913.7	-484.3	4833.7	1475.7	N 27 55 W	1034	6.60		
8150.0	89.87	N	31.02 W	7259.8	1083.8	956.6	-510.0	4876.6	1450.0	N 28 4 W	1084	0.14		
8200.0	88.46	N	31.06 W	7260.4	1133.7	999.4	-535.8	4919.4	1424.2	N 28 12 W	1134	2.81		
8250.0	86.04	N	30.77 W	7262.8	1183.5	1042.2	-561.5	4962.2	1398.5	N 28 19 W	1184	4.89		
8300.0	86.37	N	30.50 W	7266.3	1233.2	1085.2	-586.8	5005.2	1373.2	N 28 24 W	1234	0.86		
8350.0	86.94	N	29.70 W	7269.0	1283.1	1128.4	-611.8	5048.4	1348.2	N 28 28 W	1284	1.96		
8400.0	86.67	N	29.57 W	7271.9	1333.0	1171.8	-636.5	5091.8	1323.5	N 28 31 W	1333	0.61		
8450.0	91.02	N	28.34 W	7273.1	1382.9	1215.5	-660.8	5135.5	1299.2	N 28 32 W	1383	9.04		
8500.0	96.39	N	26.05 W	7269.8	1432.7	1259.8	-683.5	5179.8	1276.5	N 28 29 W	1433	11.66		
8550.0	95.10	N	25.40 W	7263.5	1482.3	1304.5	-705.0	5224.5	1255.0	N 28 23 W	1483	2.89		
8600.0	91.47	N	25.26 W	7260.8	1532.2	1349.6	-726.3	5269.6	1233.7	N 28 17 W	1533	7.26		
8650.0	88.73	N	25.09 W	7260.7	1582.2	1394.9	-747.6	5314.9	1212.4	N 28 11 W	1583	5.50		
8700.0	89.42	N	24.90 W	7261.5	1632.1	1440.2	-768.7	5360.2	1191.3	N 28 5 W	1632	1.44		
8750.0	88.18	N	23.86 W	7262.5	1682.1	1485.7	-789.4	5405.7	1170.6	N 27 59 W	1682	3.24		
8800.0	87.51	N	23.87 W	7264.4	1731.9	1531.5	-809.3	5451.5	1150.7	N 27 51 W	1732	1.32		
8850.0	84.95	N	23.41 W	7267.6	1781.8	1577.2	-829.4	5497.2	1130.6	N 27 44 W	1782	5.22		
8900.0	80.89	N	20.09 W	7273.7	1831.2	1623.1	-848.0	5543.1	1112.0	N 27 35 W	1831	10.43		
8950.0	78.32	N	20.34 W	7282.7	1880.0	1669.3	-865.0	5589.3	1095.0	N 27 23 W	1880	5.17		
9000.0	65.99	N	20.14 W	7296.4	1927.3	1714.0	-881.5	5634.0	1078.5	N 27 13 W	1927	24.67		
9050.0	74.90	N	19.51 W	7320.5	1970.1	1754.6	-896.1	5674.6	1063.9	N 27 3 W	1970	17.86		
9100.0	74.17	N	19.47 W	7334.0	2017.8	1800.1	-911.7	5720.1	1048.3	N 26 52 W	2018	1.46		
9150.0	74.61	N	21.06 W	7347.4	2065.6	1845.2	-928.6	5765.2	1031.4	N 26 43 W	2066	3.19		
9200.0	74.66	N	21.09 W	7360.5	2113.7	1890.2	-946.0	5810.2	1014.0	N 26 35 W	2114	0.10		
9250.0	71.81	N	20.57 W	7375.0	2161.2	1934.9	-963.0	5854.9	997.0	N 26 28 W	2161	5.77		
9300.0	69.18	N	21.67 W	7391.4	2208.2	1979.0	-979.9	5899.0	980.1	N 26 20 W	2208	5.65		
9350.0	67.48	N	21.64 W	7410.2	2254.4	2022.1	-997.0	5942.1	963.0	N 26 15 W	2255	3.40		
9392.0	67.80	N	21.90 W	7426.1	2293.0	2058.2	-1011.4	5978.2	948.6	N 26 10 W	2293	0.95		

DIVISION OF OIL, GAS AND MINING

**CONFIDENTIAL**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

5. Lease Designation and Serial Number:

ML-44 333

6. If Indian, Allottee or Tribe Name:

N/A

7. Unit Agreement Name:

Kane Springs Fed Unit

8. Well Name and Number:

Kane Springs Unit 16-1

9. API Well Number:

43-019-31341

10. Field and Pool, or Wildcat:

Wildcat

1. Type of Well: OIL  GAS  OTHER:

2. Name of Operator:

Coastal Oil & Gas Corporation

3. Address and Telephone Number:

P.O. Box 749, Denver, CO 80201-0749

(303) 573-4476

4. Location of Well

Footages: 960' FSL & 1960' FWL

QQ, Sec., T., R., M.: SESW, Section 16-T25S-R18E

County: Grand

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

**NOTICE OF INTENT**

(Submit in Duplicate)

- Abandonment
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Multiple Completion
- Other \_\_\_\_\_
- New Construction
- Pull or Alter Casing
- Recompletion
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

Approximate date work will start \_\_\_\_\_

**SUBSEQUENT REPORT**

(Submit Original Form Only)

- Abandonment \*
- Casing Repair
- Change of Plans
- Conversion to Injection
- Fracture Treat
- Other Drill & Complete
- New Construction
- Pull or Alter Casing
- Shoot or Acidize
- Vent or Flare
- Water Shut-Off

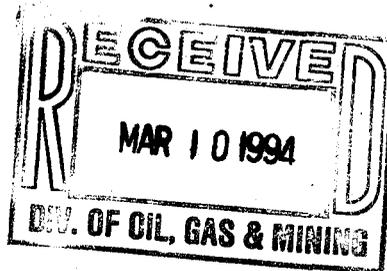
Date of work completion 11/1/93

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

\* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

See attached chronological history report and directional survey.



13.

Name & Signature: [Signature]

Joe Adamski

Environmental Coord.

Title:

Date: 3/9/94

(This space for State use only)

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1

Sec. 16-T25S-R18E

Kane Springs Unit

Grand County, UT

Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{3}{8}$ " @ 823'; 10 $\frac{3}{4}$ " @ 4995'

7 $\frac{5}{8}$ " @ 7600'

DHC(M\$): 2,240.0

- 7/23/93 MIRU, Drilling Service, build rat hole. Drill 30" hole to 67'. Set 20" @ 67' cmt w/7 yds Ready Mix. Drilled hole 7/24/93, 7:00 AM.
- 7/26/93 Dug rat hole and mouse and cellar, 10' X 8'.
- 8/10/93 MI Parker #233 - roading from Altamont, UT. Install liner. Rig moving from Altamont, UT. Trucks were on loc Saturday, Started hauling Sunday, 8/8/93. CC: \$18,638.
- 8/11/93 MIRU. CC: \$18,638.
- 8/12/93 Prep to RURT. MIRT, set matting boards. Level rig pad. Haul in sand and gravel for rig base. CC: \$58,010.
- 8/13/93 RURT. Est spud date Sunday, 8/15/93. CC: \$59,469.
- 8/16/93 139' Drlg 50 $\frac{1}{4}$  hrs. Spud @ 10:00 PM, 8/15/93. RURT. Install rotating head. PU BHA, install blooie line and RU air. Drill, RU air/mist line. Drill, PU 9" collar, 3 PT and change out rotating head rubber. Drill. CC: 102,199.
- 8/17/93 710' Drlg 571 $\frac{1}{2}$  hrs. Remove and install RT rubber. Drlg w/air. RS, drlg w/air, svy. Ream and blow hole. Drlg w/air. Blow hole, hit wtr @ 518', begin airmisting @ 545'. Drlg, blow and clean hole from 518-545'. Drlg, svy, drlg. Svys:  $\frac{1}{2}$ " @ 266';  $\frac{1}{2}$ " @ 616'. CC: \$207,199.
- 8/18/93 825' Cut off conductor pipe 115 $\frac{1}{2}$  hrs. Drlg to 825'. Circ & blow hole, finish short trip. Short trip to 3 PT free. Svy. Pump gelled sweep and load hole. TOOH, LD 1-9" DC, 6 PT, SS, 2 3 PT rmrs. RU Csg Tools, RIH w/20 jts 13 $\frac{3}{8}$ " 545# J55 BRD ST&C csg, tally row = 829.21', set @ 823', FC @ 786'. RU Howco, pump 20 bbls fresh wtr. Mix & pump 450 sx HLC Type V cmt w/10# sx CalSeal, 4% gel, 1% CaCl<sub>2</sub> tail w/380 sx Type V w/2% CaCl<sub>2</sub>,  $\frac{1}{4}$ # sx flocele. Disp w/124 BW, bump plug to 800 psi, 500 psi over. Circ 74 bbls cmt to pit. WOC. Cmt in place @ 9:30 PM, 8/17/93. Cut off and cond csg. Witnessed by Glenn Goodwin, State of UT Div of OG&M. Svy:  $\frac{1}{4}$ " @ 880'. CC: \$248,997.
- 8/19/93 825' NU and test BOPE. Cut off csg. Install csg head and well. Test weld to 750 psi - ok. NU BOPE and chk lines. Fabricate blooie line and modify chk line. Chg out pipe rams from 3 $\frac{1}{2}$ " to 5". Test BOPS, leak between BOP and double stud adapter, 10M flange. ND BOPS to change ring gasket. CC: \$282,293.
- 8/20/93 825' Blow hole dry to drill out. NU and test lower pipe rams. Leaking between double stud adapter and lower pipes. ND BOPS; remove double stud adapter. WO double stud adapter from Oil Field Rental; PU 6 PT, SS, 3 PT, 3 PT, LD 5 8 $\frac{1}{2}$ -9" DC. NU BOPS and test BOPE to 5000 psi, hydril to 2500 psi, csg to 1550 psi. All tests were valid but not witnessed; notified Frank Matthews w/UT State DOGM. Set wear bushing. PU BHA. TIH, tag cmt @ 768'. Blow hole dry. CC: \$317,691.
- 8/21/93 1678' Fill pipe w/wtr, TFNB #3 853 $\frac{1}{2}$  hrs. Drlg cmt, FC, cmt shoe. Dry hole. Drlg w/air. Svy. Drlg w/air. RS. Drlg w/air, hit wtr @ 1470'. Unload hole. Drlg w/air mist. Svy. Drlg. Fill pipe w/wtr. TFNB. Svys:  $\frac{1}{2}$ " @ 957',  $\frac{1}{4}$ " @ 1440'. CC: \$330,909.
- 8/22/93 2260' Drlg 582 $\frac{1}{2}$  hrs. TFNB, drlg w/air mist. Reserve pit full. RS. Drlg w/wtr. Trip for string float. Svy. Drlg w/aerated wtr. Svy:  $\frac{3}{4}$ " @ 1984'. CC: \$354,266.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1  
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- 8/23/93 2925' Drlg 665'/23 hrs. Drlg w/aerated wtr. RS. Svy. Drlg w/wtr and aerated wtr. Svy: 1½° @ 2486'. CC: \$363,963.
- 8/24/93 3375' Drlg 450'/22 hrs. Drlg w/wtr. Svy. Drlg w/aerated wtr. RS. Drlg w/air/aerated wtr. Change out swivel packing. Drlg. Svy: 1° @ 2885'. CC: \$376,866.
- 8/25/93 3667' Drlg w/air and wtr 292'/22 hrs. Drlg w/air and wtr w/750 CFM. RS and check BOPS. WL svy @ 3383'. Change out rot head rubber. Drlg w/air and wtr w/750/2000 CFM. WL svy @ 3647'. Drlg w/air and wtr w/1200 CFM. Svy: 2° @ 3383', 1¼° @ 3647'. Wtr/aerated wtr, MW 8.4, VIS 27. CC: \$391,576.
- 8/26/93 3931' Drlg w/air and wtr 264'/23½ hrs. Drlg w/air and wtr. RS and check BOPS. Drlg w/air and wtr. Wtr, MW 8.4, VIS 27. CC: \$401,734.
- 8/27/93 4185' Drlg w/air and wtr. 254'/16 hrs. Drlg w/air & wtr, load hole w/wtr before trip. Svy: 2° @ 3926'. TFNB. RIs & check BOP's. TIH w/bit & PU six 6¼" DC's & change out jars. Wash 40' to btm, 10' fill. Drlg w/wtr. Unload hole w/air. Drlg w/air & wtr. 1st Ismay approx 4235', Honaker Trail 40% LS, 60% SH, BGG 2, CG 0, TG 0. MW 8.4, VIS 27. CC: \$424,545.
- 8/28/93 4738' Drlg w/air and wtr. 553'/23 hrs. Drlg w/air & wtr. RIs & check BOP's. Drlg w/air & wtr. WL svy: 1½° @ 4495'. Drlg w/air & wtr. Est Paradox Salt #2 @ 4300', Clastic #2 @ 4528', Salt #3 @ 4610', Clastic #3 @ 4680', 40% SH, 30% siltstone, 30% SS, BGG 2, tr CG. MW 9.8, VIS 27. CC: \$443,727.  
Drlg Break    MPF    Gas Units  
4260-4270'    8-3½-5    tr-1200-tr    Gas cut wtr.
- 8/29/93 4995' TIH w/bit & Monel DC. 257'/6½ hrs. Drlg w/air & wtr. RIs & check BOP's. Drlg w/air & wtr. Circ for short trip. Drlg 10'. ST 15 std, 5' fill. C&C for logs. Svy: 1¼° @ 4960'. TOOH for logs & SLM 4997.62'. RU Schlumberger & run DLL-GR-CAL, Sonic from TD to sfc csg & GR to sfc. Logger TD 4999', BHT 136°E, RD logger. Pull wear bushing & LD shock sub & 3 pt reamer. WO Monel DC. TIH w/bit & Monel DC. MW 9.8, VIS 27. CC: \$460,839.
- 8/30/93 4995' ND BOP's & prep to set csg slips. Finish TIH w/bit & Monel DC. Wash 50' to btm, no fill. C&C from csg. TOOH w/bit & run multi-shot svy. RU, LD machine, & 12 - 8¼" DC, Monel DC, reamer. RU T&M csg crew. Run 117 jts 10¼" 60.7# S-95 Hyd-521, equip w/diff shoe & float, and 20 centralizers, total 5010.18'. RU Halliburton & circ csg before cmt. Cmt w/Halliburton, pump 40 bbls Super Flush, 690 sx Silica Light w/.4% gel, 4% CaCl<sub>2</sub>, .3% Halad-413, ¼ pps Flocele, 3 pps Capseal, wt 11.0, yd 2.82 CF/sx, tailed w/1145 sx PPAG Type 5, 10% salt, .6% Halad-322. CC: \$739,100.
- 8/31/93 4995' TIH w/bit. Prep to test csg. PU BOPS and set slips w/275,000#. Cut 10¼" csg. NU head. Test head w/1500 psi. Test backside to 4400 psi. NU BOPS. Test BOPS, valves, lines, manifold, chk, U&L kelly cock to 10,000 psi for 10 min, hydril 2500 psi for 10 min. PU bit, install wear bushing. PU BHA and install drill pipe rubbers. TIH, prep to test csg and disp wtr w/oil mud. MW 14.3, VIS 75, HTFL 3.2, PV 55, YP 30, 73/27% OIL, ALK 4.5, LM 5.8, CL 20M. CC: \$759,236.
- 9/1/93 5069' TOOH for plugged bit 74'/4½ hrs. Test csg w/3000 psi. Drill float, shoe jt and shoe. Drill 4995-5005'. C&C. Tested shoe to 18.5 EMW w/13.9 ppg mud and 1200 psi surf press - ok. Drill 5009-5069'; bit plugged. Slug pipe and POOH. MW 13.8, VIS 68, HTFL 1.8, PV 42, YP 30, 56% OIL, 25% SOL, PH 960, ALK 4.5, LM 5.8, CL 116, CA 74/26, GELS 8, 10" 12, CAKE 1. CC: \$809,948.

**COASTAL OIL & GAS CORPORATION**  
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**TITE HOLE**

KANE SPRINGS UNIT #16-1  
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- 9/2/93 5542' Drlg 473'/15½ hrs. POOH - pull wear ring. Finish POOH. Change jets in bit, install wear ring, PU 6 DC's, TIH. Drlg, RS, drlg. Work tight hole @ 5308'. Drlg, circ - WL Svy - mis-run. Drlg, circ - WL Svy, drlg. BG 35, CG 0, TG 31. NOTE: Bit jets plugged w/plastic ties stuck @ 5308' twice; pulled loose each time with hit from jars. Svy: 1½° @ 5357'. MW 14.0, VIS 55, HTFL 200 psi 1.8, PV 37, YP 28, 56% OIL, 24.5% SOL, PH 880, ALK 5, LM 6.5, CL 160,000, CA 74/26, GELS 7, 10" 10, CAKE 1. CC: \$838,316.
- 9/3/93 6160' Drlg 618'/22½ hrs. Drlg, RS, drlg, circ - WL svy, drlg. Formation elastic #15, BG 20, CG 2, Svy - none. Lost approx 38 bbls mud due to seepage last 24 hrs. Started nut-plug this AM. Svy: 1¼° @ 5840'. MW 145, VIS 50, HTFL 1.6, PV 31, YP 24, 57% OIL, 25% SOL, PH 1040, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 10, CAKE 1. CC: \$863,952.
- 9/4/93 6627' Drlg 467'/18 hrs. Drlg, RS, drlg, work tight hole 6230-6275'. Drlg, circ, WL Svy, drlg - some tight conn w/jars. Circ & pump LCM sweep; spot same behind DC & DP. Short trip 17 stds @ 6527'; no drag - no fill; hole clean. Drlg - control drlg 20 hrs - no problems. Salt #19, BG 12-14, CG 1-2, dn time @ 6277 = 55 min. Short trip 13. Note: Est KOP @ 6711. Svy: ¾° @ 6356'. MW 14, VIS 48, HTFL 10.4, PV 30, YP 23, 57% OIL, 25% SOL, PH 1020, ALK 5, LM 6.5, CL 196,000, CA 76/24, GELS 7, 10" 9, CAKE 2. CC: \$892,569.
- 9/5/93 6711' RD Schlumberger 84'/5 hrs. Drlg, RS, Drlg to 6711' KOP. C&C, short trip 10 stds; no drag - no fill. C&C for log. Tripping out (SLM) w/multi-shot to csg shoe @ 4995'. Retrieve multi-shot w/WL. Ran gyro thru DP on WL to 900'. Finish TOH (SLM), LD BHA. Change out wear bushing. RU Schlumberger and ran GR, Sonic Caliper log 6714' to surface. WLTD 6714', board 6711', SLM 6715'. RD Schlumberger. Salt #19, BG 12, CG 1-2, short trip 50 @ 6711'. Svy: 2¾° multi-shot @ 6711' S18W. MW 14, VIS 49, HTFL 10.6, PV 30, YP 22, 58% OIL, 25.2% SOL, PH 1000, ALK 5, LM 6.5, CL 196,000, CA 77/23, GELS 7, 10" 9, CAKE 2. CC: \$919,663.
- 9/6/93 6843' Slide drlg 128'/13 hrs. PU directional tools - BHA and HWDP. RD LD mach. TIH, replace bad DP rubbers. Circ & orient motor. Slide drlg 6715-6843', building angle. Clastic #19, BGG 20-30, CG 2-4, TG 63 after logging. Tops: Clastic #19 @ 6818'. Pick up wt 210,000, slack out wt 200,000. MW 14.2, VIS 52, HTFL 10.0, PV 32, YP 22, 58% OIL, 26.3% SOL, PH 990, ALK 5.4, LM 70, CL 187,000, CA 78/22, GELS 6, 10" 8, CAKE 2. CC: \$951,219.
- |                    |            |                  |  |
|--------------------|------------|------------------|--|
| <u>Drlg Breaks</u> | <u>MFP</u> | <u>Gas Units</u> |  |
| 6824-6828'         | 25-5-14    | 12-100-25        |  |
| 6830-6832'         | 18-5-15    | 25-136-30        |  |
- 9/7/93 6915' Drlg 72'/22½ hrs. Slide drlg 6843-6854', building angle. RS, slide drlg 6854-6858', building angle. Circ out gas 6858', max 9600, mud cut 14.2-12.6. Slide drlg 6858-6915', building angle. Now building md wt 15.3-15.6. Salt #20 @ 6899', BG 4640 w/15.3, CG 9280 @ 6885' w/14.9, FCD .4, pick up wt 210,000, slack out wt 200,000. MW 15.3, VIS 52, HTFL 9.6, PV 38, YP 24, 56% OIL, 30.5% SOL, PH 1060, ALK 6.5, LM 8.4, CL 187,000, CA 80/20, GELS 7, 10" 10, CAKE 2. CC: 9278,936.
- |                    |              |                  |   |
|--------------------|--------------|------------------|---|
| <u>Drlg Breaks</u> | <u>MFP</u>   | <u>Gas Units</u> |   |
| 6842-6848'         | 25-12-20     | 25-70-50         | SH blk sft carb.  |
| 6852-6864'         | 30/18-6-8/35 | 45-7000-5120     | SLTST lt gry-gry brn, vfxln sft dol.<br>TVD Clastic #19 = 6812' MD = 6816'. |
- 9/8/93 6966' Install wear bushing. Prep to TIH 51'/3 hrs. Slide drlg from 6917-6966'. C&C mud, raise wt to 16.5. Short trip 5 stds, hole free; short trip BGG 9600 U max. C&C mud, raise wt to 17.0 (mud cut from 16.5 to 14.5 after short trip). Short trip 5 stds, hole free; short trip gas 7360 U. C&C mud; mud, gas cut .3 lb/gal; BGG 2560 U. TOQH, LD 18 jts DP, remove DP rubbers, install wear bushing. Salt #20, 6899'. MW 17.4, VIS 56, HTFL 10.4, PV 48, YP 28, 53% OIL, 36.9% SOL, PH 1040, LM 7.25, CL 196,000, CA 85/15, GELS 8, 10" 10, CAKE 2. CC: \$1,010,769.

COASTAL OIL & GAS CORPORATION  
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TITE HOLE

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- 9/9/93 6966' TIH w/PDC and 2° X 1° directional assembly. Change BHA. Work BOPS. TIH. Could not get thru KOP @ 6715'. Circ out gas. Had intermittent flare of 15'. Orient tools. Slide ream 6709-6799'. Started taking wt, 167' off btm. Bit is in 19-22°/100 build. Circ out gas. TOOH. LD 1° motor. PU 2° X 1° motor to ream w/same assembly which drilled original hole. Cut drill line. Continue TIH hole 100' from KOP @ report time. MW 17.4, VIS 59, HTFL 10.8, PV 46, YP 24, 52% OIL, 37.9% SOL, PH 1080, ALK 5.6, LM 7.3, CL 206,000, CA 84/16, GELS 7, 10" 9, CAKE 2. CC: \$1,032,126.
- 9/10/93 6966' MU BHA #5 and TIH. TIH, W&R from 16,756' to 6802'. C&C mud. TOOH, LD BHA. PU hole opener w/2' bull nose and 6 pt, TIH. Attempt to get in hole w/wtr - no luck. C&C mud. TOOH, LD HO and 6 pt rmr. PU PT 2½° Motor and BHA and TIH. MW 17.5, VIS 64, HTFL 11, PV 49, YP 22, 50% OIL, 38.8% SOL, PH 1110, LM 7.0, CL 196,000, CA 82/18, GELS 7, 10" 10, CAKE 2. CC: \$1,056,242.
- 9/11/93 6832' 6828' TVD. Slide drill w/PDC bit & PT 2°x1° motor 29' /8 hrs. TIH, fill pipe @ 2100' and 5100'. Drlg from 6803-6819'. C&C hole. Pump pill. TOOH, LD motor, work BOPS, PU PT 2°x1° motor, PDC bit. TIH, fill pipe @ 2500' and 5100', orient motor. Slide drill from 6819-6832'. TVD 6827'. MW 17.6, VIS 74, HTFL 10.6, PV 55, YP 21, 52% OIL, 40% SOL, PH 1120, LM 62, CL 215,000, CA 85/15, GELS 7, 10" 10, CAKE 2. CC: \$1,083,471.
- 9/12/93 6911' 6899' TVD. Drlg 79' /24 hrs. Slide drlg sidetrack #1, MW 17.6 in/17.3 out, VIS 61, HTFL 10.6, PV 52, YP 23, 51% OIL, 38.5% SOL, PH 1040, LM 9, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,107,451.
- 9/13/93 7070' 7010' TVD. Drlg 159' /24 hrs. Slide drlg. MW 17.5, VIS 55, HTFL 10.2, PV 512, YP 24, 51% OIL, 39% SOL, 1060 PH, LM 9.3, CL 215,000, CA 84/16, GELS 7, 10" 10, CAKE 2. CC: \$1,128,155.
- 9/14/93 7125' Slide drill 55' /4½ hrs. Slide drlg to 7094'. Circ btm up, pump pill. TOOH, LD jt 6" DP. Jar out of hole from 6995 (48°) to 6893' (29°). Ream from 6893' to 7094'. Circ, mix and pump pill. TOOH, LD 12 jts 6" DP. Run leak off test to 18.5 equiv at csg shoe, bled off 10 psi in 6 min. PU 1° mud motor, TIH. W&R from 7067' to 7094'. Slide drlg. MW 17.7, VIS 72, HTFL 10, PV 58, YP 28, 51% OIL, 39% SOL, PH 1180, LM 9, CL 215,000, CA 86/14, GELS 8, 10" 12, CAKE 2. CC: \$1,152,510.
- 9/15/93 7257' C&C mud for trip and for motor 132' /6½ hrs. Drlg and rot from 7125-7257'. Pump pill, short trip 12 stds; 4th std tight. TIH 8 stds, hit bridge @ 6839'. Attempt work 1° mud motor thru bridge; hole sticky and tight; C&C. TOOH w/1° motor and LD. PU bit, 3 pt, XO and TIH to 6839'. Begin circ and W&R from 6839-7258'. C&C for short trip; short trip 5 stds - no tight spots. C&C mud. MW 17.8, VIS 61, HTFL 10.6, PV 58, YP 26, 51.5% OIL, 42% SOL, PH 1760, LM 9.0, CL 215,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,180,010.
- 9/16/93 7327' TIH w/1½° motor & MWD 70' /5 hrs. C&C, mix and pump pill. TOOH w/bit for motor. Change out BHA, LD 3 pt & bit, check blind rams and PU mud motor and MWD, change out stab, and align motor w/MWD. TIH w/1° motor and MWD and change out jars. W&R from 7214' to 7257'. Slide drlg from 7257-7289'. Drlg & rot from 7289' 7327'. Circ btm up from top Kane Creek and mix pill and pump. TOOH for 1½° motor or change. Check blind rams and change motor and LD stab and align motor w/MWD. TIH w/1½° motor and MWD and fill DP @ 2500' and 5100'. MW 17.6, VIS 55, HTFL 10.2, PV 51, YP 23, 53% OIL, 38% SOL, PH 1320, LM 9.0, CL 215,000, CA 85/15, GELS 8, 10" 11, CAKE 2. CC: \$1,207,860.
- 9/17/93 7374' Slide drlg 47' /23 hrs. Slide drlg from 7327-7361'. Change hose, quick conn on std pipe, finish drlg recorder and visulogger. Slide drlg from 7361-7374'. MW 17.4, VIS 52, HTFL 11.0, PV 51, YP 20, 53% OIL, 38% SOL, PH 1450, LM 7.8, CL 200,000, CA 84/16, GELS 7, 10" 9, CAKE 2, ECD 17.9 lb/bbl. CC: \$1,230,743.

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- 9/18/93 7375' W&R to btm @ 7350' 1 1/4 hrs. Slide drlg from 7374-7375'. C&C, mix and pump pill. TOOH w/motor and bit — stuck @ 7321' and jar out of hole to 7118'. Finish TOOH w/motor and bit. Drag from 7118' to 7024' w/25,000 psi. LD motor and sperry sun, tool. PU 3 pt and 6 pt and TIH w/bit to shoe. Cut drlg line. Finish TIH w/bit to 7181'. W&R from 7181' to 7375'. Lost 10 bbls in seepage. MW 17.3, VIS 62, HTFL 11.6, PV 53, YP 28, 52% OIL, 36.8% SOL, PH 1460, LM 7.8, CL 200,000, CA 83/17, GELS 10, 10" 13, CAKE 2. CC: \$1,250,500.
- 9/19/93 7399' Slide drlg 24'/13 hrs. C&C, mix and pump pill. TOOH w/3 pt, 6 pt and bit. LD rmr, PU new motor and change bend, align w/MWD and make up MWD. TIH w/bit and motor. Begin circ and orient tool. Slide drlg from 7375-7399'. MW 17.4, VIS 59, HTFL 12.8, PV 52, YP 26, 53% OIL, 39% SOL, PH 1380, ALK 5.0, LM 6.5, CL 203,000, CA 85/15, GELS 7, 10" 12, CAKE 2. CC: \$1,278,367.
- 9/20/93 7413' Slide drlg @ 7413' 14'/11 1/2 hrs. Slide drlg from 7399-7408'. RS and check BOPS. Pump pill and TOOH w/bit and motor. Change bit, check blind rams. TIH w/bit and motor to 5070'. Fill pipe and check motor and MWD. TIH w/bit and motor to 6946'; hit bridge, attempt to turn motor — wouldn't go. W&R from 6946-7408'. Ream hard from 6946-7033' — still wouldn't go without pump. Slide drlg from 7408-7413'. MW 17.5, VIS 62, HTFL 11.2, PV 52, YP 28, 54% OIL, 39% SOL, PH 1400, ALK 5.0, LM 6.5, CL 200,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,330,876.
- 9/21/93 7433' Slide drlg @ 7433' 20'/8 1/2 hrs. Slide drlg from 7413-7423'. Circ, mix and pump pill. TOOH for 1° motor. Align MWD, change degree on motor and PU stab. Open blind rams and RS. TIH w/1° motor and bit; slips slipping in DP. WO DP slips from Vernal. TIH to 5074'. Fill pipe and check MWD and motor. TIH w/bit and motor, hit bridge @ 6839', orient motor and fall thru. Slide drlg from 7423-7433'. MW 17.6, VIS 58, HTFL 11.6, PV 50, YP 21, 57% OIL, 36.3%, PH 1480, ALK 5.5, LM 7.1, CL 200,000, CA 89/11, GELS 7, 10" 10, CAKE 2, ECD .4 lb/bbl. CC: \$1,351,041.
- 9/22/93 7530' Slide drlg 97'/23 1/2 hrs. Slide drlg from 7433-7445'. RS. Slide drlg from 7445-7450'. Rotate drlg from 7450-7528'. Slide drlg from 7528-7530'. Cane Creek, BGG 1500/1600, CG 3080/7509, no shows. String wts: pickup 210,000#, slack-off 185,000#, rotating 195,000#; torque 115 amps. MW 17.4, VIS 54, HTFL 12.0, PV 48, YP 22, 57% OIL, 37% SOL, PH 1500, ALK 6.0, LM 7.8, CL 220,000, CA 89/11, GELS 8, 10" 13, CAKE 2. Projected Svy @ 7530': inclination 82°, direction 335.3°, TVD 7168.18', vertical section 474.42', coordinates 423.00°N 214.82°W, DLS 1.40°/100'. CC: \$1,380,688.
- 9/23/93 7581' Slide drlg 51'/23 1/2 hrs. Slide drlg 7530-7540'. RS. Slide drlg 7540-7581'. Cane Creek BG 1400/1600, CG 2320/7571, down time pump 1920/7565, PU 210,000, SO 185,000. NOTE: Analine point of diesel is 152°. MW 17.5, VIS 55, HTFL 11.4, PV 50, YP 28, 55% OIL, 39% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 89/11, GELS 7, 10" 12, CAKE 2. See attached svy report for svys. CC: \$1,401,334.
- 9/24/93 7,603' C&C for short trip 22'/9 hrs. Slide drlg 7581-7586'. Rotate drlg 7586-7603'. Mix and pump slug. POOH. LD BHA and tools. PU new BHA, TIH to 7323'. W&R 7323-7603. C&C for short trip. A-5 Anydrite @ 7592' MP, BG 1040, CG @ 7571' - 2320, down time 2240, trip 8800' behind gas buster w/20' intermitted flare. NOTE: did not touch anything, TIH to 7323'; #1 pump down. See attached svy report for svys. MW 17.6, VIS 59, HTFL 11.6, PV 55, YP 26, 53% OIL, 40% SOL, PH 1600, ALK 5.6, LM 7.3, CL 190,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,421,921.
- 9/25/93 7603' TIH w/7 5/8" liner @ 6000'. Short trip 11 stds - ok. C&C for csg. Short trip - ok. C&C for csg. Mix and pump slug - drop rabbit. POOH SLM, DL BHA. RU csg crew. PU and ran 7 5/8" liner, 62 jts 39# S-95 Hydril 521 and liner hanger w/pkr. RD csg tools. TIH w/liner, SLM; fill every 9 stds. Shoe now @ 6000'. MW 17.6, VIS 59, HTFL 11.7, PV 58, YP 23, 54% OIL, 40% SOL, PH 1600, ALK 5.5, LM 7.1, CL 190,000, CA 88/12, GELS 8, 10" 15, CAKE 2. CC: \$1,499,343.

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- 9/26/93 7603' Rig repair - #1 pump. Finish TIH w/7½" liner. RU Howco. Circ out gas. Hang liner and cmt by Howco w/30 bbk SAM-4 spacer @ 18#, 175 sx poz scavenger @ 14#, 470 sx Premium AG-250 w/40# Hidense and .5% Halad 322 @ 19# and .2% CBL. Disp w/20 bbbs SAM-4 spacer and 170 bbbs invert mud @ 17.6#. Bump plug w/1400 psi @ 11:46 AM, 9/25/93. Float held ok; had good circ thru job. Reversed out 8 bbbs cmt and 30 bbbs scavenger. Set pkr, PU and circ (reverse), press test pkr to 1000 psi - ok. RD Howco. TOOH 37 stds; TIH w/HWDP. RU LD mach and LD HWDP and excess DP. MW 17.7, VIS 62, HTFL 10.6, PV 59, YP 27, 55% OIL, 40% SOL, PH 1530, ALK 5.0, LM 6.5, CL 190,000, CA 90/10, GELS 9, 10" 15, CAKE 2. CC: \$1,608,126.
- 9/27/93 7603' TIH w/6½" bit to clean out liner. Change out pump #1. Change top set of pipe rams to variable. Test BOPS's and manifold variable rams on 4" and 5" DP to 10,000 psi, Hydril on 4" and 5" to 2500 psi, upper and lower kelly valves and relayed equipment to 10,000 psi. Change out tongs and RU floor to run 4" DP. PU BHA and SLM, TIH. MW 17.7, VIS 69, HTFL 10.8, PV 57, YP 27, 55% OIL, 40% SOL, PH 1500, ALK 5.0, LM 5.6, CL 190,000, CA 90/10, GELS 8, 10" 14, CAKE 2. CC: \$1,622,434.
- 9/28/93 7606' Drlg new formation 3'/3½ hrs. RD T&M - change out elevators and tongs. Finish TIH w/5" DP and tag top of liner @ 4765'. Drlg - clean out top of liner. Press test csg and liner to 1065 psi; lost 15 psi in 15 min (17.6). TIH and tag up @ 7505'; had 1' cmt on top of landing collar. Drlg landing collar and float. Drlg cmt and shoe; cmt drilled @ 20'/hr. Drlg new formation. BG 26, 50% anhydrate, 50% cmt. MW 16.0, VIS 53, HTFL 9.6, PV 35, YP 21, 58% OIL, 34% SOL, PH 1310, ALK 5.5, LM 7.1, CL 196,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,649,797.
- 9/29/93 7714' Drlg 108'/11½ hrs. Drlg, C&C mud. Run equiv mud test 16 ppg to 18.5 ppg, 933 psi. TOOH, change BHA, align motor w/MWD. TIH, break circ. Wash to btm, break in bit. Slide drlg from 7606-7616'. Circ btms up. Slide drlg from 7616-7620'. Drlg from 7620-7683'. Circ btms up. Slide drlg from 7683-7710'. Drlg from 7710-7714'. Avg 4'/hr sliding; 10'/hr rotating. See attached svy report for svys. MW 15.9, VIS 49, HTFL 9.4, PV 31, YP 19, 60% OIL, 33% SOL, PH 1340, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 7, 10" 10, CAKE 2. CC: \$1,705,735.
- 9/30/93 7920' Drlg 206'/22½ hrs. Slide drill from 7714-7745'. RS. Slide drill from 7745-7748'. Rotate drill from 7748-7755'. Circ btms up. Slide drill from 7755-7920'. BGG 22, B5 - silt, 100% siltstone. MW 15.9, VIS 48, HTFL 10.8, PV 30, YP 20, 59% OIL, 32% SOL, PH 1360, ALK 5.2, LM 7.0, CL 182,000, CA 87/13, GELS 6, 10" 10, CAKE 2. CC: \$1,726,879.
- 10/1/93 8194' Drlg 274'/23½ hrs. Slide drill from 7920-7961'. RS. Slide drill from 7961-8025'. Rotate drill from 8025-8055'. Slide drill from 8055-8100'. Rotate drill from 8100-8105'. Slide drill from 8105-8129'. Rotate drill from 8129'. Mud losses of 5-10 lbs @ 7818', 7873', 7990', 8080'. MW 15.8, VIS 49, HTFL 11.4, PV 37, YP 21, 59% OIL, 32% SOL, PH 1440, ALK 5, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,746,994.
- 10/2/93 8370' MD, 7268' TVD Rotate drill 176'/18½ hrs. Slide drill from 8194-8242'. Circ btms up. Short trip 11 stds. Slide drill from 8242-8256'. Rotate drill from 8256-8266'. Slide drill from 8266-8273'. RS. Rotate drill from 8273-8278'. Slide drill from 8278-8322'. Rotate drill from 8322-8335'. Circ samples, WOO. Rotate drill from 8335-8365'. Circ btms up. Rotate drill from 8365-8370'. BGG 20, SH dk grn - blk carb. MW 15.5, VIS 47, HTFL 12, PV 36, YP 22, 60% OIL, 31% SOL, PH 1440, ALK 4.7, LM 6.1, CL 177,000, CA 87/13, GELS 7-2, 10" 11, CAKE 2. CC: \$1,770,645.

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- 10/3/93 8469' Drlg 99'/14 hrs. Rotate drill from 8370-8397'. RS. Rotate drill from 8397-8417'. Slide drill from 8417-8421'. Mix and pump pill. TOOH. Shim motor to 1½"; align motor. TIH, fill pipe @ 4091'. W&R 32' to btm. Slide drill from 8421-8425'. Remove and replace blown-up vibrating hose on mud line under sub. Drlg. MW 15.5, VIS 49, HTFL 10.2, PV 35, YP 21, 61% OIL, 32% SOL, PH 1460, ALK 5.3, LM 6.9, CL 191,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: 1,791,039.
- 10/4/93 8534' TIH w/1° PT motor 65'/14 hrs. Slide drill from 8469-8534'. Circ btm up. Pump pill. TOOH, LD 21 jts 5" DP. Change out motor, align same. Check BOPS. TIH, PU 21 jts 4" DP. Fill pipe @ 4850'. MW 15.5, VIS 52, HTFL 10, PV 37, YP 21, 61% OIL, 31% SOL, PH 1440, ALK 5.5, LM 7.1, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,816,328.
- 10/5/93 8683' Rotate drlg 149'/21 hrs. TIH. Slide drlg from 8535-8552'. Rotate drlg from 8552-8557'. RS. Rotate drlg from 8557-8560'. Circ btms up. Rotate drlg from 8560-8588'. Slide drlg from 8642-8650'. Slide drlg from 8650-8659'. Rotate drlg from 8659-8683'. MW 15.5, VIS 50, HTFL 9.8, PV 34, YP 21, 60% OIL, 32% SOL, PH 1460, ALK 5.0, LM 6.5, CL 178,000, CA 87/13, GELS 7, 10" 11, CAKE 2. CC: \$1,835,290.
- 10/6/93 8534' TVD 7263'. Sidetracking and time drlg @ 8534' 56'/19 hrs. Rotate drlg from 8683-8712'. RS. Slide drlg from 8712-8729'. Circ btms up. Pump pill, LD 6 jts DP, short trip to shoe. WOO & circ. Ream from 8524-8529' and start sidetracking. Sidetracking and time drlg from 8524-8534'. MW 15.6, VIS 50, HTFL 9.8, PV 32, YP 21, 59% OIL, 32.1% SOL, PH 1420, ALK 4.8, LM 6.2, CL 182,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,854,175.
- 10/7/93 8641' 7259' TVD. Slide drlg @ 8641' 107'/23½ hrs. Sidetracking drlg from 8534-8556'. RS. Slide drlg from 8556-8641'. Lost 20 bbls in seepage. MW 15.5, VIS 51, HTFL 9.6, PV 34, YP 20, 60% OIL, 32% SOL, PH 1420, ALK 5.2, LM 6.7, CL 196,000, CA 87/13, GELS 7, 10" 10, CAKE 2. CC: \$1,886,128.
- 10/8/93 8800' 7262.78' TVD. Rotate drlg @ 8800' 159'/23½ hrs. Rotate & drlg from 8641-8712'. RS. Rotate & drlg from 8712-8717'. Slide drlg from 8717-8721'. Rotate & drlg from 8721-8729'. Slide drlg from 8729-8752'. Rotate & drlg from 8752-8800'. Lost 28 bbls in seepage. MW 15.5+, VIS 51, HTFL 9.4, PV 35, YP 20, 60% OIL, 31.1% SOL, PH 1420, ALK 5.0, LM 6.5, CL 196,000, CA 87/13, GELS 8, 10" 11, CAKE 2. CC: \$1,905,952.
- 10/9/93 8935' 7277.63' TVD. Rotate drlg @ 8935' 135'/22½ hrs. Slide drlg from 8800-8836'. Circ btms up for samples. RS and check BOPS. Rotate drlg from 8836-8848'. Slide drlg from 8848-8899'. Rotate drlg from 8899-8935'. Lost 5 bbls in seepage. MW 15.5, VIS 53, HTFL 9.6, PV 35, YP 20, 61% OIL, 31.2% SOL, PH 1460, ALK 5.3, LM 6.9, CL 196,000, CA 88/12, GELS 8, 10" 11, CAKE 2. CC: \$1,924,879.
- 10/10/93 9070' 7298.23' TVD. Rotate drlg @ 9070' 135'/20½ hrs. Rotate drlg from 8935-8943'. Slide drlg from 8943-8962'. Pump pill. Short trip 22 stds and 18 stds in orient tool face and finish TIH 4 stds. Rotate drlg from 8962-8992'. RS and check BOPS. Slide drlg from 8992-9054'. Rotate drlg from 9054-9070'. Lost 10 bbls in seepage. MW 15.6, VIS 53, HTFL 9.4, PV 36, YP 20, 59% OIL, 32% SOL, PH 1520, ALK 4.9, LM 6.3, CL 187,000, CA 87/13, GELS 8, 10" 12, CAKE 2. CC: \$1,949,076.
- 10/11/93 9191' 7319.62' TVD. Slide drlg @ 9191' 121'/24 hrs. Rotate drlg from 9070-9077'. Slide drlg from 9077'. MW 15.5, VIS 54, HTFL 9.4, PV 39, YP 22, 58% OIL, 31.2% SOL, PH 1500, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,968,044.
- 10/12/93 9309' 7355.4' TVD. Slide drlg @ 9309' 118'/24 hrs. Slide drlg from 9191-9390'. MW 15.5, VIS 55, HTFL 9.0, PV 40, YP 22, 58% OIL, 32% SOL, PH 1495, ALK 5.8, LM 7.5, CL 168,000, CA 84/16, GELS 8, 10" 12, CAKE 2. CC: \$1,996,128.

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- 10/13/93 9002' Sidetrack @ 8987'; now slide drlg @ 9002' 15'/20½ hrs. Slide drlg 9309-9315'. Rot drlg 9315-9351'. RS, work BOPS. Pump pill for sidetrack @ 8987'. POOH 11 jts to 8987'. Ream for sidetrack 8987-8992'. Time drlg @ 6" HR 8987-8990' slide. Time drlg @ 1' HR 8990-9000' slide. Time drlg @ 2' HR 9000-9002' slide. B-5 silt/B-4 SH (contact), BGG 5, CG 0, TG 0. MW 15.5, VIS 52, HTFL 9.0, PV 37, YP 21, 58% OIL, 32% SOL, PH 1580, ALK 5.5, LM 7.1, CL 168,000, CA 84/16, GELS 7, 10" 13, CAKE 2. CC: \$2,016,420.
- 10/14/93 9003' Time drlg (slide) for sidetrack @ 9001' 2'/3½ hrs. Sidetrack drlg from 9002-9008' @ 2 FPH. Sidetrack drlg from 9008-9018' @ 3 FPH, could not get sidetracked. RS, work BOPS. C&C, build slug. Pump pill & TOOH. Change out motor from 1° to 1½°; align same. Install MWD tool. TIH to 4747', fill pipe. Cut drlg line. TIH to 8500'. Orient tool face. TIH, tag bridge @ 8625'. W&R 8625-8670'. Finish TIH to 8996'. Orient tool face and ream from 8996-8670'. Time drlg (slide) for sidetrack @ 9001'. BGG 4-6, CG 0, TG @ 9018' 22. MW 15.6+, VIS 55, HTFL 9.2, PV 38, YP 23, 57% OIL, 33% SOL, PH 1610, ALK 5.0, LM 6.5, CL 165,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,052,375.
- 10/15/93 9011' Prep to screw onto fish 8'/11½ hrs. Slide drlg for sidetrack from 9003-9009' @ 6"-1'/hr. RS. Slide drlg for sidetrack from 9009-9011' @ 1'/hr. Lost 800 psi, circ mix pill and slug pipe. TOOH, change out jars and MWD tool. Left bit and btm 4' of mud motor and 10.7' of rotor in hole. PU MWD and align same w/mud motor pulled; will attempt to screw back onto fish. TIH, fill pipe @ 4700'. Install rot head, prep to try and screw onto fish. MW 15.6, VIS 51, HTFL 8.8, PV 34, YP 20, 57% OIL, 33% SOL, PH 1680, ALK 4.8, LM 6.2, CL 162,000, CA 84/16, GELS 7, 10" 12, CAKE 2. CC: \$2,072,887.
- 10/16/93 9011' TIH w/1½° bit and motor to finish sidetrack. Attempt to screw back onto fish. TOOH — no rec. PU overshot and make up fishing tools. RS, work BOPS. TIH w/fishing tools. LD 3 jts 4" DP; PU 3 jts 4" DP. Fish for bit and motor part. TOOH — rec all of fish, LD same. PU BHA #20, motor and MWD. Align motor and MWD. PU kelly and test ok. TIH w/1½° bit and motor. MW 15.9, VIS 58, HTFL 8.8, PV 40, YP 26, 57% OIL, 34% SOL, PH 1520, ALK 4.8, LM 6.2, CL 160,000, CA 85/15, GELS 9, 10" 18, CAKE 2. CC: \$2,105,568.
- 10/17/93 9019' POOH w/fish (bit, lower section of mud motor and rotor) 8'/5½ hrs. Finish TIH w/bit, 1½° mud motor and BHA. Time drlg for sidetrack; slide from 9011-9019'. RS, work BOPS. Lost 700 psi; attempt to screw back @ separation. Pump slug and POOH left btm 3' of mud motor, bit and rotor in hole. WO fishing tools. Make up fishing tools — overshot w/¾" basket grapple. TIH w/same. Engage fish @ 9016'. Build slug; pump pill and POOH w/fish. MW 15.8, VIS 63, HTFL 8.8, PV 42, YP 26, 58% OIL, 32% SOL, PH 1600, ALK 4.5, LM 5.8, CL 165,000, CA 84/16, GELS 8, 10" 19, CAKE 2. CC: \$2,125,934.
- 10/18/93 9024' Changing out mud motor and stabilizer; thread (lock stabilizer) 5'/2½ hrs. Finish POOH — rec all of fish. LD fish; break down and lay out fishing tools. RS, check BOPS. PU motor and align MWD; test ok. TIH, PU 12 jts 4" SHDP. Circ and work pipe to clean up any junk on btm. Slide drlg from 9019-9024'. MWD started acting up. Mix and pump pill. POOH, stabilizer on motor had backed half way off, causing bearings to fall; motor locked up. Change out MWD and check bit — ok. Change out mud motor and stabilizer — thread (lock stabilizer). MW 15.9, VIS 57, HTFL 9.0, PV 40, YP 23, 56% OIL, 33% SOL, PH 1580, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 8, 10" 15, CAKE 2. CC: \$2,148,896.
- 10/19/93 9086' TOOH to find PSI loss 62'/12 hrs. Align mud motor with MWD and test — ok. TIH, RS. TIH to 8917', fill pipe @ 5200'. W&R 8917-9024'. Slide drlg 9024-9030'. Rot drlg 9030-9035'. Slide drlg 9035-9064'. Rot drlg 9064-9086'. PU to make conn; lost 800 psi, slack off and touch btm 10' high. Circ and clean hole while building pill. Pump pill. TOOH to find PSI loss. B-4 silt, BGG 16, CG 0, TG @ 9024' 17. MW 15.9, VIS 56, HTFL 9.0, PV 38, YP 24, 55.5% OIL, 33.5% SOL, PH 1600, ALK 4.0, LM 5.2, CL 160,000, CA 82/18, GELS 7, 10" 14, CAKE 2. CC: \$2,181,398.

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- 10/20/93 9086' WO spear to fish 5 3/4" OD, WP ext and OS. TOOH for press loss. Motor backed off @ shim connection. RS, work pipe and blind rams. Cut drlg line. WO fishing tools. PU 6 1/8" OS w/5" grapple, 5 3/4" WP ext, bumper sub jars and TIH. Tag obstruction @ 9013'. Circ & work OS to top fish @ 9084', work fish. Mix and pump pill. TOOH, left 5 3/4" OD WP ext & 6 1/8" OS in hole. Backed off WP, top sub & 4' ext. 17.43' OS & WP left in hole. Have 6' to spear into. WO spear. MW 16.4, VIS 63, HTFL 8.6, PV 43, YP 24, 55% OIL, 34.3% SOL, PH 1560, ALK 3.8, LM 4.9, CL 125,000, CA 84/16, GELS 8, 10" 15, CAKE 2. CC: \$2,201,591.
- 10/21/93 8900' MD, 7272' TVD Sidetrack #4, time drlg 6"/hr 3 7/7 hrs. WOO. RS. WOO. PU bit, 1.4° D475 Drilex motor, align motor w/MWD. TIH to 4700'. Fill pipe, orient and test tools. TIH. Ream and start sidetracking. Slide time drill @ 6"/hr. Cane Creek B-4 Silt, 100% siltstone, BGG 15, TG 32. MW 16, VIS 60, HTFL 9.6, PV 41, YP 21, 57% OIL, 33.1% SOL, PH 1520, ALK 3.9, LM 5, CL 159,000, CA 85/15, GELS 8, 10" 13, CAKE 2. CC: \$2,259,324.
- 10/22/93 8912' TIH 12 1/4 hrs. Time drill. RS. Time drill to 8912'. PU, check sidetrack. Motor stalling; could not get started again. Mix and pump pill. TOOH, change out Drilex motor. PU 1.3° D475 Drilex motor. TIH, orient motor and MWD, TIH. Cane Creek B-4 Silt, 50% siltstone, 50% SH, BGG 8-12. MW 15.5, VIS 51, HTFL 9.4, PV 36, YP 20, 58% OIL, 31.1% SOL, PH 1400, ALK 52, LM 6.73, CL 170,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,287,202.
- 10/23/93 8924', 7276.46' TVD Drlg 12 1/2 hrs. TIH. Orient motor, W&R 24' to btm. Time drlg, mud motor stalling. Pump pill. TOOH, LD Drilex motor. PU PT, 1 1/4° motor, align w/MWD, test motor. TIH, fill DP, orient tool. TIH, time drlg 8912-8924' @ 8918', motor stalling as if in frac or formation change. B-4 Silt/B-4 SH contact, 50% siltstone, 50% SH w/anhy and salt fill frac, BGG 12-16, TG 12. MW 15.5, VIS 59, HTFL 10.2, PV 42, YP 19, 56% OIL, 33% SOL, PH 1520, ALK 48, LM 6.2, CL 192,000, CA 82-18, GELS 7, 10" 3, CAKE 2. CC: \$2,318,858.
- 10/24/93 9038', 7302' TVD Rotate drill 114 1/2 hrs. Time drlg from 8929'. RS. Slide drlg from 8929-8970'. Circ btms up. Pump pill. TOOH, change out mud motors, align motor w/MWD, Baker-lock stb on motor. Work BOPS. TIH. Fill pipe @ 4995'. Orient tools. TIH, slide drlg from 8970-8991'. Rotate drill. B-5 Silt/B-5 SH boundary, 100% siltstone, BGG 30-40, TG 20 @ 8970'. MW 15.6, VIS 54, HTFL 10.2, PV 36, YP 20, 58% OIL, 32% SOL, PH 1560, ALK 48, LM 62, CL 150,000, CA 84-16, GELS 7, 10" 12, CAKE 2. CC: \$2,341,609.
- 10/25/93 9272', 7366' TVD Drlg 234 1/2 hrs. Rotate drill 9038-9054'. Slide drill 9054-9084'. RS, Rotate drill 9084-9194'. Slide drill 9194-9249'. Rotate drill 9249-9272'. Lost approx 16 bbls mud to seepage last 24 hrs. MW 15.5, VIS 52, HTFL 9.6, PV 35, YP 19, 58% OIL, 32% SOL, PH 1440, ALK 52, LM 6.7, CL 142,000, CA 84-16, GELS 7, 10" 11, CAKE 2. CC: \$2,361,319.
- 10/26/93 9332' TIH 60 1/11 hrs. Rotate drill from 9272-9283'. Slide drill from 9283-9301'. RS. Slide drill from 9301-9328'. Rotate drill from 9328-9332'. Lost pump press after conn @ 9332', 200 PSI @ 108 SPM to 2400 PSI @ 110 SPM, set back down on btm w/10,000#. Turn to right; got press increase. Mix and pump pill. TOOH, LD motor. PU new motor, weld straps on conn of new motor and Baker-lock rest of conn, orient motor w/MWD, TIH. Lost approx 19 bbls mud to seepage last 24 hrs. MW 15.5, VIS 55, HTFL 9.4, PV 37, YP 21, 58% OIL, 32% SOL, PH 1540, ALK 5.1, LM 6.6, CL 133,000, CA 84-16, GELS 8, 10" 13, CAKE 2. CC: \$2,384,750.
- 10/27/93 9424' TIH w/setting tool and retainer to 7479.61' 92 1/6 1/2 hrs. TIH w/motor, MWD, and bit. Fill DP and orient motor @ 8525'. Install rot head and TIH. Rotate drlg from 9332-9394'. RS. Rotate drlg from 9394-9406'. Slide drlg from 9406-9424'. Pump pill and TOOH 19 stds. C&C. TOOH and SLM out, LD 2 jts & HW DP and jars. LD motor, 2 knobby moneil and MWD moneil and all XO. PU setting tool and retainer and TIH w/DP to 7479.61'. MW 16.0, VIS 65, HTFL 9.6, PV 42, YP 21, 57% OIL, 34% SOL, PH 1500, ALK 5.2, LM 6.7, CL 159,000, CA 85-15, GELS 8, 10" 14, CAKE 2. CC: \$2,408,023.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1  
Kane Springs Unit  
Grand County, UT

Page 10

10/28/93 9424' Press testing BOPS. WOO. Set retainer @ 7563'. RU Halliburton, test csg and retainer 500 psi - ok and DP 1000 psi - ok. Injection rate 1½ bbls min, 2600 psi cmt w/125 sx prem H w/.1% HR-4, 100 sx below retained and 75 sx on top. LD 3 jts DP. Reverse out, no cmt and RD Halliburton. RU LD mech, LDDP and break kelly and LD 4" HWDP. Change out lower pipe rams. LD Homco tools and load out 4" DP and 4" HWDP. WO 27/8" tbg. Press testing BOPS. MW 16.3, VIS 68, HTFL 9.8, PV 44, YP 22, 54% OIL, 35% SOL, PH 1560, ALK 5.1, LM 6.6, CL 142,000, CA 82-18, GELS 8, 10" 13, CAKE 2. CC: \$2,438,670. FINAL DRILLING REPORT.

COASTAL OIL & GAS CORPORATION  
CHRONOLOGICAL HISTORY

TITE HOLE

KANE SPRINGS UNIT #16-1

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Kane Springs Unit

Grand County, UT

Parker #233/ACT

WI: 48.09% COGC AFE: 14246

ATD: 7180' TVD/10,200' MD SD: 8/15/93

CSG: 20" @ 89'; 13 $\frac{3}{8}$ " @ 823'; 10 $\frac{3}{4}$ " @ 4995'

7 $\frac{7}{8}$ " @ 7600'

CWC(M\$): 2,585.0

- 10/29/93 9424' Running GR/CBL w/Halliburton. Finish press testing BOPS. Tests tbg rams, blind rams 5000 psi 10 min - ok, hyd 2500 psi 10 min - ok. PU 237 jts 2 $\frac{7}{8}$ " tbg 6.5# N-80 EUE, total 7411.62'. Disp hole w/300 bbls pit wtr and 575 bbls 3% KCL wtr wt 8.5. TOOH w/tbg for logs. ND Grant rot head and NU 13 $\frac{3}{8}$ " XO flange for lubricator. RU Halliburton and run GR and CBL w/2500 psi. CC: \$2,467,797.
- 10/30/93 9424' Making up BHA, 6 $\frac{1}{2}$ " mill and csg scraper. ND XO flange for lubricator. Put new ring w/teflon tape and NU XO flange for lubricator. RU loggers and test XO flange 3400 psi. Run GR-CBL w/3400 psi to 7025'. Log back to 1650', top cmt 1860. RD loggers and ND XO flange. PU 4' SPF gun, sub SX, 2 $\frac{7}{8}$ " jts, P/nipple, 2 $\frac{7}{8}$ " jts, r/nipple, 2 $\frac{7}{8}$ " jts, XO, sub, Baker pkr, setting tool, sub, 2 $\frac{7}{8}$ " jts, subj. TIH w/tbg, pkr, and guns. Pkr wouldn't go through liner hanger. TOOH w/pkr, guns and LD 2 jts. LD pkr, stand back perf gun. WO mill csg scraper and mill. Make up mill and csg scraper. CC: \$2,476,763.
- 10/31/93 9424' TIH w/stinger and tbg. TIH w/tbg, mill and scraper top liner. PU power swivel. Mill out linr top w/6 $\frac{1}{2}$ " mill. LD power swivel. TIH w/tbg, mill and scraper to 6843'. TOOH w/tbg, mill and scraper. PU perf guns and pkr tools. TIH w/tbg, pkr and perf gun. Run GR & CL w/Halliburton and tie in w/R A Marker. RIH w/1 std tbg and PU 1 jt tbg and 8' pup. Run GR and CL w/Halliburton and tie in w/R. A. Marker. Drop ball and press up and set pkr @ 6710' w/2000 psi and 15,000# wt on pkr. TOOH w/setting tool and LD w/1 hr time change fall back. PU stinger, 1 jt 2 $\frac{7}{8}$ " tbg and f/nipple and 71 stds. CC: \$2,517,574.
- 11/1/93 9424' Flow testing well and swabbing well 3000'. PU pup and 1 jt 2 $\frac{7}{8}$ " tbg and install tbg donut, set w/12,000# wt on seal assembly and test 2000 psi 5 min - ok. ND BOPS and NU 10,000# XO, 5000# tree and test tree and line to separate to 5000 psi - ok and retrieve 2-way BP valve. Swab well 3000', swab cup stacked out, run w/swab mandrel - no go, stacked out. Run in w/sinker bars 6000'. Drop bar and five perf off. Flow test well - no press or fluid to surface. Flow testing well and swabbing well dn 3000'; total 13 run, 25.3 bbls wtr to surface w/weak blow. CC: \$2,563,006.

# COASTAL OIL & GAS

KANE SPRINGS #16-1  
 GRAND COUNTY UTAH  
 ACTUAL VS PROPOSED

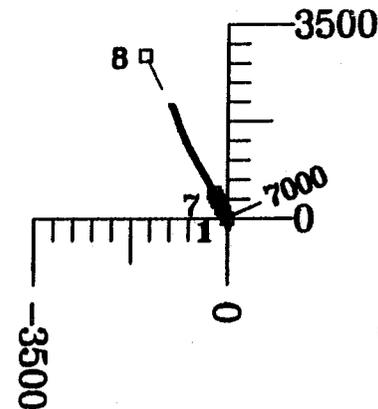
*well file*

HORIZONTAL SCALE:

1"=3500'

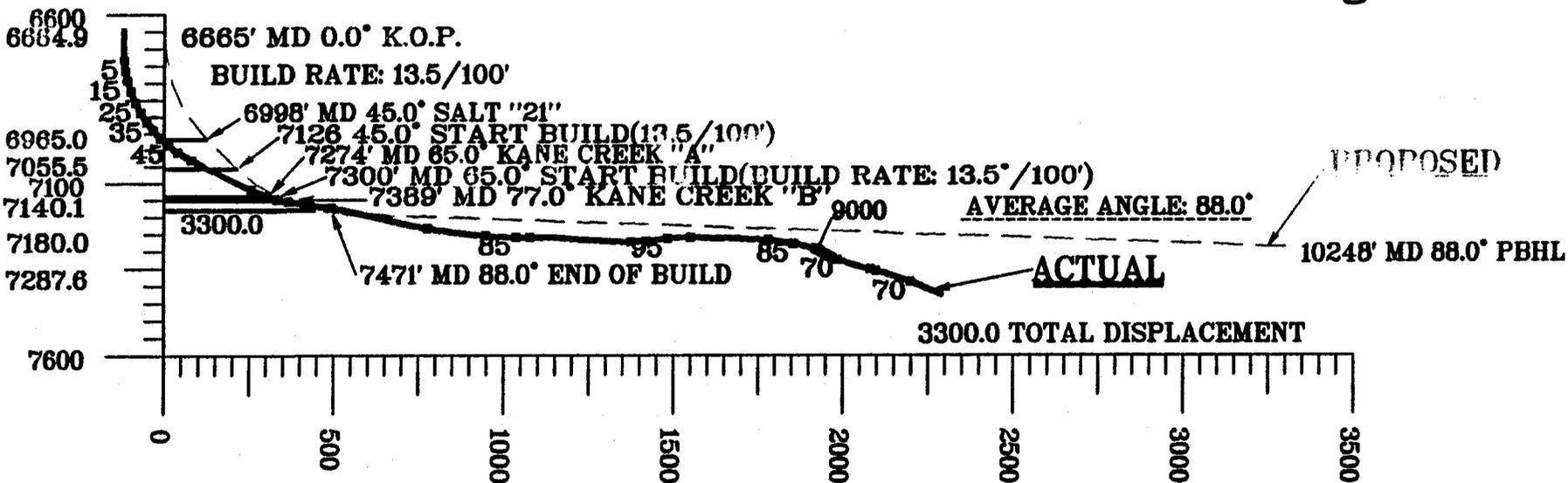
Cobb Horizontal Technology  
 & Directional Services

SURFACE LOCATION:  
 3920' FSL & 1960' FWL  
 BOTTOM HOLE LOCATION:  
 5978' FSL & 949' FWL  
 7426' TVD 9392' MD



VERTICAL SCALE:

1"=500'



PLANE OF VERT SECTn 333.13°  
 PLOT DATE 07-23-1993

## WELL PROPOSAL

Sec	MD	TVD	VS	INC	DIR	LAT	DEP	TGT
1	6664.9	6664.9	0.0	0.0	333.13	0.0	0.0	
2	6998.2	6965.0	124.3	45.0	333.13	110.9	-56.2	
3	7126.2	7055.5	214.8	45.0	333.13	191.6	-97.1	
4	7274.4	7140.1	335.6	65.0	333.13	299.3	-151.7	
5	7300.6	7151.1	359.3	65.0	333.13	320.6	-162.4	
6	7389.5	7180.0	443.2	77.0	333.13	395.4	-200.3	
7	7471.0	7190.7	523.9	88.0	333.13	467.3	-236.8	
8	10248.8	7287.6	3300.0	88.0	333.13	2943.8	-1491.5	



: COASTAL OIL & GAS  
: KANE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)  
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COBB DIRECTIONAL DRILLING \ HORIZONTAL TECHNOLOGY

DASTAL OIL & GAS  
 ANE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)

MINIMUM CURVATURE CALCULATIONS

21-DEC-93 Page 1

MEASURED DEPTH (Ft)	INC. Deg	DIR.		TVD (Ft)	VERT. (Ft)	N / S		E / W		LEASE LINE		CLOSURE		DLEG SEV. /100(Ft)
		Dir	Dir			(Ft)	(Ft)	(Ft)	(Ft)	FSL (Ft)	FWL (Ft)	AZIMUTH Deg Min	DIST (Ft)	
6649.0	3.00	S	1.00 E	6646.8	-118.5	-128.2	9.0	3791.8	1969.0	S	4 2 E	129	0.00	
6650.0	2.93	S	3.02 W	6647.8	-118.5	-128.3	9.0	3791.7	1969.0	S	4 2 E	129	21.65	
6700.0	1.48	N	36.85 W	6697.8	-118.5	-128.5	8.6	3791.5	1968.6	S	3 49 E	129	7.80	
6750.0	7.14	N	13.46 W	6747.6	-115.2	-125.3	7.6	3794.7	1967.6	S	3 28 E	126	12.74	
6800.0	15.85	N	11.47 W	6796.6	-105.7	-115.7	5.6	3804.3	1965.6	S	2 45 E	116	17.44	
6850.0	23.00	N	14.95 W	6843.6	-89.3	-99.3	1.6	3820.7	1961.6	S	0 54 E	99	14.56	
6900.0	30.25	N	17.61 W	6888.3	-67.5	-78.0	-4.7	3842.0	1955.3	S	3 26 W	78	14.75	
6950.0	37.94	N	19.08 W	6929.6	-39.7	-51.4	-13.6	3868.6	1946.4	S	14 50 W	53	15.47	
7000.0	45.70	N	20.82 W	6966.8	-6.7	-20.1	-25.0	3899.9	1935.0	S	51 8 W	32	15.72	
7050.0	53.78	N	21.57 W	6999.2	31.1	15.3	-38.7	3935.3	1921.3	N	68 27 W	42	16.20	
7100.0	59.16	N	22.37 W	7025.1	73.7	54.8	-54.9	3974.8	1905.1	N	45 6 W	78	10.84	
7150.0	63.96	N	23.10 W	7050.5	116.6	94.5	-71.4	4014.5	1888.6	N	37 3 W	118	9.70	
7200.0	63.63	N	23.03 W	7072.6	161.3	135.8	-88.9	4055.8	1871.1	N	33 14 W	162	0.67	
7250.0	63.73	N	23.70 W	7094.8	206.0	176.9	-106.7	4096.9	1853.3	N	31 6 W	207	1.22	
7300.0	64.91	N	22.91 W	7116.5	251.0	218.2	-124.6	4138.2	1835.4	N	29 44 W	251	2.76	
7350.0	69.05	N	22.80 W	7136.2	296.8	260.6	-142.5	4180.6	1817.5	N	28 41 W	297	8.28	
7400.0	77.03	N	23.11 W	7151.1	344.4	304.5	-161.0	4224.5	1799.0	N	27 52 W	344	15.98	
7450.0	82.24	N	24.36 W	7159.7	393.5	349.6	-180.7	4269.6	1779.3	N	27 21 W	394	10.70	
7500.0	82.81	N	24.50 W	7166.0	443.1	394.7	-201.4	4314.7	1758.6	N	27 2 W	443	1.18	
7550.0	80.00	N	24.98 W	7173.1	492.5	439.6	-222.0	4359.6	1738.0	N	26 47 W	493	5.71	
7600.0	77.58	N	26.41 W	7183.1	541.5	483.8	-243.2	4403.8	1716.8	N	26 42 W	541	5.58	
7650.0	77.80	N	27.50 W	7193.7	590.3	527.3	-265.4	4447.3	1694.6	N	26 43 W	590	2.18	
7700.0	76.95	N	28.63 W	7204.6	639.1	570.3	-288.4	4490.3	1671.6	N	26 50 W	639	2.79	
7750.0	77.16	N	28.77 W	7215.9	687.8	613.0	-311.9	4533.0	1648.1	N	26 58 W	688	0.51	
7800.0	78.64	N	28.76 W	7226.4	736.7	655.9	-335.3	4575.9	1624.7	N	27 5 W	737	2.96	
7850.0	80.64	N	28.90 W	7235.5	785.8	699.0	-359.1	4619.0	1600.9	N	27 11 W	786	4.01	
7900.0	82.18	N	29.82 W	7242.8	835.2	742.1	-383.2	4662.1	1576.8	N	27 19 W	835	3.57	
7950.0	83.24	N	30.14 W	7249.0	884.8	785.1	-408.0	4705.1	1552.0	N	27 28 W	885	2.22	
8000.0	84.34	N	30.56 W	7254.5	934.4	828.0	-433.1	4748.0	1526.9	N	27 37 W	934	2.35	
8050.0	86.57	N	30.88 W	7258.5	984.1	870.8	-458.6	4790.8	1501.4	N	27 46 W	984	4.52	

COBB DIRECTIONAL DRILLING \ HORIZONTAL TECHNOLOGY

DASTAL OIL & GAS  
 ANE SPRINGS 16-1\GRAND COUNTY\UTAH (WELL# 1)

MINIMUM CURVATURE CALCULATIONS

21-DEC-93 Page 2

MEASURED DEPTH (Ft)	INC. Deg	DIR. Deg	TVD (Ft)	VERT. (Ft)	N / S (Ft)	E / W (Ft)	LEASE LINE		CLOSURE		DLEG SEV. /100(Ft)
							FSL (Ft)	FWL (Ft)	AZIMUTH Deg Min	DIST (Ft)	
8100.0	89.87	N 30.95 W	7259.9	1033.9	913.7	-484.3	4833.7	1475.7	N 27 55 W	1034	6.60
8150.0	89.87	N 31.02 W	7259.8	1083.8	956.6	-510.0	4876.6	1450.0	N 28 4 W	1084	0.14
8200.0	88.46	N 31.06 W	7260.4	1133.7	999.4	-535.8	4919.4	1424.2	N 28 12 W	1134	2.81
8250.0	86.04	N 30.77 W	7262.8	1183.5	1042.2	-561.5	4962.2	1398.5	N 28 19 W	1184	4.89
8300.0	86.37	N 30.50 W	7266.3	1233.2	1085.2	-586.8	5005.2	1373.2	N 28 24 W	1234	0.86
8350.0	86.94	N 29.70 W	7269.0	1283.1	1128.4	-611.8	5048.4	1348.2	N 28 28 W	1284	1.96
8400.0	86.67	N 29.57 W	7271.9	1333.0	1171.8	-636.5	5091.8	1323.5	N 28 31 W	1333	0.61
8450.0	91.02	N 28.34 W	7273.1	1382.9	1215.5	-660.8	5135.5	1299.2	N 28 32 W	1383	9.04
8500.0	96.39	N 26.05 W	7269.8	1432.7	1259.8	-683.5	5179.8	1276.5	N 28 29 W	1433	11.66
8550.0	95.10	N 25.40 W	7263.5	1482.3	1304.5	-705.0	5224.5	1255.0	N 28 23 W	1483	2.89
8600.0	91.47	N 25.26 W	7260.8	1532.2	1349.6	-726.3	5269.6	1233.7	N 28 17 W	1533	7.26
8650.0	88.73	N 25.09 W	7260.7	1582.2	1394.9	-747.6	5314.9	1212.4	N 28 11 W	1583	5.50
8700.0	89.42	N 24.90 W	7261.5	1632.1	1440.2	-768.7	5360.2	1191.3	N 28 5 W	1632	1.44
8750.0	88.18	N 23.86 W	7262.5	1682.1	1485.7	-789.4	5405.7	1170.6	N 27 59 W	1682	3.24
8800.0	87.51	N 23.87 W	7264.4	1731.9	1531.5	-809.3	5451.5	1150.7	N 27 51 W	1732	1.32
8850.0	84.95	N 23.41 W	7267.6	1781.8	1577.2	-829.4	5497.2	1130.6	N 27 44 W	1782	5.22
8900.0	80.89	N 20.09 W	7273.7	1831.2	1623.1	-848.0	5543.1	1112.0	N 27 35 W	1831	10.43
8950.0	78.32	N 20.34 W	7282.7	1880.0	1669.3	-865.0	5589.3	1095.0	N 27 23 W	1880	5.17
9000.0	65.99	N 20.14 W	7296.4	1927.3	1714.0	-881.5	5634.0	1078.5	N 27 13 W	1927	24.67
9050.0	74.90	N 19.51 W	7320.5	1970.1	1754.6	-896.1	5674.6	1063.9	N 27 3 W	1970	17.86
9100.0	74.17	N 19.47 W	7334.0	2017.8	1800.1	-911.7	5720.1	1048.3	N 26 52 W	2018	1.46
9150.0	74.61	N 21.06 W	7347.4	2065.6	1845.2	-928.6	5765.2	1031.4	N 26 43 W	2066	3.19
9200.0	74.66	N 21.09 W	7360.5	2113.7	1890.2	-946.0	5810.2	1014.0	N 26 35 W	2114	0.10
9250.0	71.81	N 20.57 W	7375.0	2161.2	1934.9	-963.0	5854.9	997.0	N 26 28 W	2161	5.77
9300.0	69.18	N 21.67 W	7391.4	2208.2	1979.0	-979.9	5899.0	980.1	N 26 20 W	2208	5.65
9350.0	67.48	N 21.64 W	7410.2	2254.4	2022.1	-997.0	5942.1	963.0	N 26 15 W	2255	3.40
9392.0	67.80	N 21.90 W	7426.1	2293.0	2058.2	-1011.4	5978.2	948.6	N 26 10 W	2293	0.95

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

**CONFIDENTIAL**

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

1b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESRV.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
Coastal Oil & Gas Corporation

3. ADDRESS OF OPERATOR  
P.O. Box 749, Denver, CO 80201-0749

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)  
At surface 960' FSL & 1960' FWL (SE,SW)  
At top prod. interval reported below (9392' MD) 5978.2' FSL & 948.6 FWL  
At total depth

5. LEASE DESIGNATION AND SERIAL NO.  
ML-44 333

6. IF INDIAN, ALLOTTEE OR TRIBE NAME  
N/A

7. UNIT AGREEMENT NAME  
Kane Springs Fed Unit

8. FARM OR LEASE NAME  
Kane Springs

9. WELL NO.  
16-1

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC. T. R. M. OR BLOCK AND SURVEY OR AREA  
Sec. 16-T25S-R18E

**RECEIVED**  
MAR 10 1994  
DIVISION OF OIL & GAS

14. API NO. 43-019-31341 DATE ISSUED 7/26/93

12. COUNTY Grand 13. STATE Utah

15. DATE SPUNDED 8/15/93 16. DATE T.D. REACHED 10/27/93 17. DATE COMPL. (Ready to prod.) 11/1/93 18. ELEVATIONS (DP, BEB, RT, GR, ETC.) 5147 GR 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 7426+ TVD 21. PLUG BACK T.D., MD & TVD 22. IF MULTIPLE COMPL. HOW MANY 23. INTERVALS DRILLED BY 9424' MD ROTARY TOOLS CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) 25. WAS DIRECTIONAL SURVEY MADE Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN GR/CBL 27. WAS WELL CORED YES  NO  (Submit analysis) DRILL STEM TEST YES  NO  (See reverse side)

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	545# J55STC	823'	17 1/2"	830 sxs 'V' w/add	74 bbis
10 3/4"	60.7# S95H521	4995'	12 1/4"	690 sx Lt+1145 sx PPAG w/add	None
7 5/8"	39# S95H521	7600'	9 1/2"	175 sx POZ+407 sx Prem.	8 bbis
	Retainer @	7563'			

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 7/8"	6710'	6710'

31. PERFORATION RECORD (Interval, size and number)  
PBD 7544'  
6830-6878' (192 total shots) 4 JSPF  
4" van gun, pkr @ 6710'

32. ACID. SHOT. FRACTURE. CEMENT SQUEEZE ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
6830-6878	3500 gal chem wash w/60% CO2
6830-6878	Frac w/40,593 gal YF140 + YF145 gel plus 50,080# 20/40 mes prop.

33. PRODUCTION

DATE FIRST PRODUCTION 11/1/93 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) FLWG WELL STATUS (Producing or shut-in) Prod

DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
11/11/93	23 hrs	8/64	97	93	0	113 BLW	

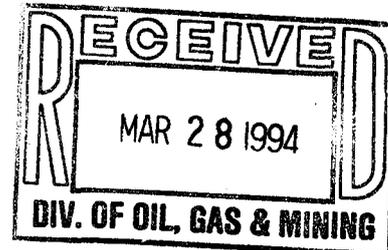
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)
850	24 hrs	97	97		118	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records  
SIGNED Joe Adamski TITLE Environmental Coordinator DATE 3/9/94





March 22, 1994

State of Utah  
Division of Oil, Gas & Mining  
Attn: Mr. R. J. Firth  
355 W. N. Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180

**CONFIDENTIAL**

Bureau of Land Management  
Attn: Eric Jones  
82 E. Dogwood  
Moab, UT 84532

**Reference: Columbia Gas Development Corporation  
Kane Springs Unit #16-1  
Sec.16-T25S-R18E  
Grand County, Utah**

Gentlemen:

Please find attached a Sundry Notice reporting pit closure activities at the above-referenced location.

Should you have any questions or require additional information, please contact me at 713/871-3400.

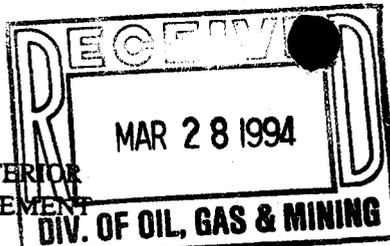
Very truly yours,

COLUMBIA GAS DEVELOPMENT CORPORATION

Wendy G. DesOrmeaux  
Regulatory Coordinator

cc: Joe Adamski, Coastal Oil & Gas

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
DIV. OF OIL, GAS & MINING



FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.  
Use "APPLICATION FOR PERMIT—" for such proposals

**SUBMIT IN TRIPLICATE**

<p>1. Type of Well  <input checked="" type="checkbox"/> Oil Well    <input type="checkbox"/> Gas Well    <input type="checkbox"/> Other</p> <p>2. Name of Operator                  Columbia Gas Development Corporation</p> <p>3. Address and Telephone No.                  P. O. Box 1350, Houston, TX 77251-1350 713/871-3400</p> <p>4. Location of Well (Footage, Sec., T., R., M., or Survey Description)                  960' FSL &amp; 1960' FWL, SE SW Sec.16-T25S-R18E</p>	<p>5. Lease Designation and Serial No.                  ML-44333</p> <p>6. If Indian, Allottee or Tribe Name                  N/A</p> <p>7. If Unit or CA, Agreement Designation                  Kane Springs Federal Unit</p> <p>8. Well Name and No.                  Kane Springs Ut. 16-1</p> <p>9. API Well No.                  43-019-31341</p> <p>10. Field and Pool, or Exploratory Area                  Wildcat</p> <p>11. County or Parish, State                  Grand Cty., Utah</p>
---	--

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent <input checked="" type="checkbox"/> Subsequent Report <input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Abandonment <input type="checkbox"/> Recompletion <input type="checkbox"/> Plugging Back <input type="checkbox"/> Casing Repair <input type="checkbox"/> Altering Casing <input checked="" type="checkbox"/> Other <u>Pit Closure</u>
	<input type="checkbox"/> Change of Plans <input type="checkbox"/> New Construction <input type="checkbox"/> Non-Routine Fracturing <input type="checkbox"/> Water Shut-Off <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Dispose Water <small>(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)</small>

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

SEE ATTACHED PIT CLOSURE REPORT.

CONFIDENTIAL

14. I hereby certify that the foregoing is true and correct

Signed Wendy L. Desbreaux Title Regulatory Coordinator Date 3/22/94

(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
 Conditions of approval, if any: \_\_\_\_\_

**COLUMBIA GAS DEVELOPMENT CORPORATION**

**KANE SPRINGS UNIT #16-1  
SEC.16-T25S-R18E  
GRAND COUNTY, UTAH**

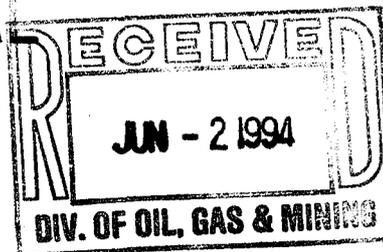
**PIT CLOSURE REPORT**

- 2/12/94 - Evaporated and hauled off 2346 bbls pit water to  
2/22/94 Neola, Utah.
- 2/22/94 - Set up centrifuge pumps and air compressor.  
3/1/94 Centrifuged pit contents.
- 3/2/94 - Moved in track hoe and dozer. Mixed and stabilized  
3/5/94 pit contents with subsoil, 100 tons clay and 100  
tons bentonite.
- 3/6/94 - Backfilled pits and placed gel cap on same. Placed  
3/11/94 topsoil over pit area. Will reseed in the Fall.
- 3/12/94 - Reclaimed old two-track trail on east side of  
3/13/94 location. Cut down location on north side and  
constructed two-track trail to tie into old trail  
on west side of location.



VIA AIRBORNE EXPRESS

**CONFIDENTIAL**



June 1, 1994

State of Utah  
Division of Oil, Gas & Mining  
355 W. N. Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180

Attention: Mr. R. J. Firth

Reference: Columbia Gas Development Corporation  
Kane Springs Unit #16-1  
Sec.16-T25S-R18E  
Grand County, Utah

Dear Mr. Firth:

Please find attached a Sundry Notice reporting the date of first production, purchaser, and transporter for the oil produced at the above-referenced location.

This well is classified as an oil well. Average gas production at this location is 40 MCF/D, for a monthly average of 1240 MCF. Therefore, at the current production rates, this well meets the requirements of R615-3-20 1.1, which authorizes the flaring of gas of up to 1800 MCF per month. We will continue to monitor the production and if the gas production rates approach or exceed 1800 MCF per month, we will request the necessary authorizations.

Should you have any questions or require additional information, please contact me at 713/871-3482.

Very truly yours,

COLUMBIA GAS DEVELOPMENT CORPORATION

Wendy G. DesOrmeaux  
Regulatory Coordinator

cc: Bob Pruitt  
Pruitt, Gushee, & Bachtell

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

6. Lease Designation and Serial Number ML-44333
7. Indian Allottee or Tribe Name N/A
8. Unit or Communitization Agreement Kane Springs Federal Unit
9. Well Name and Number Kane Springs Unit 16-1
10. API Well Number 43-019-31341
11. Field and Pool, or Wildcat Wildcat

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT for such proposals

**CONFIDENTIAL**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other (specify)	
2. Name of Operator Columbia Gas Development Corporation	
3. Address of Operator P. O. Box 1350, Houston, TX 77251-1350	4. Telephone Number 713/871-3400
5. Location of Well Footage 960' FSL & 1960' FWL QQ, Sec. T., R., M. : SE/SW Sec. 16-T25S-R18E County : Grand State : UTAH	

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

**NOTICE OF INTENT**  
(Submit in Duplicate)

<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Other _____	

Approximate Date Work Will Start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

<input type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction
<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Shoot or Acidize
<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Other <u>First Production</u>	

Date of Work Completion \_\_\_\_\_

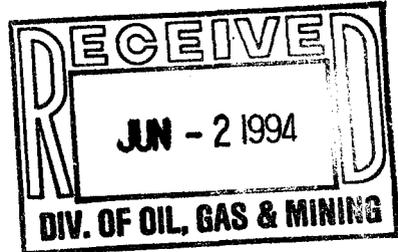
Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.  
\* Must be accompanied by a cement verification report.

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

The above-referenced well was put on production 5/11/94.

Purchaser: Amoco Production Company

Transporter: D. B. Taylor



14. I hereby certify that the foregoing is true and correct

Name & Signature Wendy G. DeCarmey Title Regulatory Coord Date 6/1/94  
(State Use Only)

**DRILLING LOCATION ASSESSMENT**

**State of Utah  
Division of Oil, Gas and Mining**

OPERATOR: COASTAL OIL & GAS CORPORATION WELL NAME: 16-1  
SECTION: 16 TWP: 25S RNG: 18E LOC: 960' FSL 1960' FWL SURFACE,  
(PROPOSED BOTTOM HOLE 460' FWL 1360' FNL)  
QTR/QTR SESW COUNTY: GRAND FIELD: WILDCAT  
SURFACE OWNER: STATE OF UTAH  
SURFACE AGREEMENT: NA  
SPACING: FEDERAL UNIT - 500 ft. BUFFER FROM UNIT BOUNDARY  
GEOLOGIST: G. HUNT DATE AND TIME: 6-30-93 08:00

PARTICIPANTS: Frank Matthews-DOG M, Glenn Goodwin-DOG M,  
Ed Bonner-State Lands, Ken Phippen-DWR, Eileen Day-Coastal, plus  
contractors, surveyors, etc. *Paul Brashers-Coastal.*

REGIONAL SETTING/TOPOGRAPHY: The proposed location is located on  
a high flat area between Spring Canyon and Hell Roaring Canyon on  
the northwest and southeast. It is approximately 26 miles  
northwest of Moab and 14 miles northwest of Dead Horse Point  
State Park.

LAND USE:

CURRENT SURFACE USE: Domestic grazing and recreation.

PROPOSED SURFACE DISTURBANCE: A roughly rectangular pad is to be  
constructed with approximate dimensions of 400' X 290' including a  
200' X 95' X 12' reserve pit. Access will be off an existing  
county road. An existing ungraded road will be re-routed through  
the location.

AFFECTED FLOODPLAINS AND/OR WETLANDS: None

FLORA/FAUNA: Ephedra, Blackbrush, Prickly pear, various wild  
grasses and flowers/ Lizards, Rabbits deer, Peregrines and Golden  
eagles in the area according to DWR, not critical time however.

ENVIRONMENTAL PARAMETERS

SURFACE GEOLOGY

SOIL TYPE AND CHARACTERISTICS: Silty-sand, depth unknown.

SURFACE FORMATION & CHARACTERISTICS: Kayenta

EROSION/SEDIMENTATION/STABILITY: No active erosion or  
sedimentation at present. Location should be stable.

PALEONTOLOGICAL POTENTIAL: None observed.

SUBSURFACE GEOLOGY

OBJECTIVES/DEPTHS: Cane Creek-7,205'

ABNORMAL PRESSURES-HIGH AND LOW: High pressures are anticipated in the Cane Creek interval.

CULTURAL RESOURCES/ARCHAEOLOGY: Arc survey conducted by Metcalf, report will be sent to DOGM.

CONSTRUCTION MATERIALS: Onsite materials will be used for construction.

SITE RECLAMATION: Site will be backfilled, leveled and re-contoured as soon as pit dries and can be closed. DOGM cleanup guidelines should be met. State Lands will recommend seed mix. If production is established unneeded area of the location will be reclaimed as soon as pit dries adequately.

RESERVE PIT

CHARACTERISTICS: Pit will be rectangular in shape 200' X 95', 12' deep with 3:1 slope sides. At least one-half depth below original land surface.

LINING: The pit shall be lined with a synthetic liner of at least 12 mil thickness and installed so as to prevent punctures.

MUD PROGRAM: Air mist to 4,850' then oil base to TD, refer to APD for details.

DRILLING WATER SUPPLY: A local permitted source with existing water rights. Will supply name and permit number later.

OTHER OBSERVATIONS

STIPULATIONS FOR APD APPROVAL

- Pit should be netted after rig moves until fluid being contained is gone (recommendation DWR).
- Pit lined with 12 mil or greater.

ATTACHMENTS

Photographs will be placed on file.

*Costal will reclaim location according to State lands spec.*

Evaluation Ranking Criteria and Ranking Score  
For Reserve Pit - Coastal 16-1

Site-Specific Factors	Ranking Score	Final Ranking Score
Distance to Groundwater (feet)  >200 100 to 200 75 to 100 25 to 75 <25 or recharge area	  0 5 10 15 20	0
Distance to Surf. Water (feet)  >1000 300 to 1000 200 to 300 100 to 200 < 100	  0 2 10 15 20	0
Distance to Nearest Municipal Well (feet)  >5280 1320 to 5280 500 to 1320 <500	  0 5 10 20	0
Distance to Other Wells (feet)  >1320 300 to 1320 <300	  0 10 20	0
Native Soil Type  Low permeability Mod. permeability High permeability	  0 10 20	20

Fluid Type		15
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud	15	
Fluid containing significant levels of hazardous constituents	20	
Drill Cuttings		10
Normal Rock	0	
Salt or detrimental	10	
Annual Precipitation (inches)		0
<10	0	
10 to 20	5	
>20	10	
Affected Populations		0
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	
Presence of Nearby Utility Conduits		0
Not Present	0	
Unknown	10	
Present	15	

Final Score	45
-------------	----

Scores greater than 20 require total containment with synthetic liner or other means.

2003 WRD@ 1400 ASIG proposed maximum  
est. avg. injection pressure is 1000 psig @ surface

R649-5-3

NATURAL RESOURCES

✓ 2.1. A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed well, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well.

✓ 2.2. Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper, and porosity.

✓ 2.3. A copy of a cement bond or comparable log run for the proposed injection well after casing was set and cemented.

OK 2.4. Copies of logs already on file with the division should be referenced, but need not be refiled.

✓ 2.5. A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well.

✓ 2.6. A statement as to the type of fluid to be used for injection, its source and estimated amounts to be injected daily.

✓ 2.7. Standard laboratory analyses of (1) the fluid to be injected, (2) the fluid in the formation into which the fluid is being injected, and (3) the compatibility of the fluids.

✓ 2.8. The proposed average and maximum injection pressures.

✓ 2.9. Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining interval that could enable the injected fluid or formation fluid to enter the fresh water strata.

✓ 2.10. Appropriate geological data on the injection interval and confining beds, including the geologic name, lithologic description, thickness, depth, and lateral extent; also information relative to geologic structure near the proposed well which may effect the conveyance and/or storage of the injected fluids.

✓ 2.11. A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no conduit exists that could enable fluids to migrate up or down the wellbore and enter improper intervals.

✓ 2.12. An affidavit certifying that a copy of the application has been provided to all operators, owners, and surface owners within a one-half mile radius of the proposed injection well.

2.13. Any other additional information that the board or division may determine is necessary to adequately review the application.

3. Applications for injection wells which are within a recovery project area will be considered for approval:

3.1. Pursuant to R649-5-1-3.

3.2. Subsequent to board approval of a recovery project pursuant to R649-5-1-1.

4. Approval of an injection well is subject to the requirements of R649-5-4, if the proposed injection interval can be classified as an USDW.

5. In addition to the requirements of this section, the provisions of R649-3-1, R649-3-4, R649-3-24, R649-3-32, and R649-8-1 and R649-10 shall apply to all Class II injection wells.

R649-5-3. Noticing And Approval Of Injection Wells.

1. Applications for injection wells submitted pursuant to R649-5-1-3 shall be noticed in conformance with the procedural rules of the board as part of the hearing for the recovery project. Any person desiring to object to approval of such an application for an injection well shall file the objection in conformance with the procedural rules of the board.

2. The receipt of a complete and technically adequate application, other than an application submitted pursuant to R649-5-3-1, shall be considered as a request for agency action by the Division and shall be published in a daily newspaper of general circulation in the city and county of Salt Lake and in a newspaper of general circulation in the county where the proposed well is located. A copy of the notice of agency action shall also be sent to all parties including government agencies. The notice of agency action shall contain at least the following information:

2.1. The applicant's name, business address, and telephone number.

2.2. The location of the proposed well.

2.3. A description of proposed operation.

3. If no written objection to the application for administrative approval of an injection well is received by the division within 15 days after publication of the notice of agency action, or an aquifer exemption is not required in accordance with R649-5-4, and a board hearing is not otherwise required, the application may be considered and approved administratively.

4. If a written objection to an application for administrative approval of an injection well is received by the division within 15 days after publication of the notice of application, or if a hearing is required by these rules or deemed advisable by the director, the application shall be set for notice and hearing by the board.

5. The director shall have the authority to grant an exception to the hearing requirements of R649-5-1.1 for conversion to injection of additional wells which constitute a modification or expansion of an authorized project provided that any such well is necessary to develop or maintain thorough and efficient recovery operations for any authorized project and provided that no objection is received pursuant to R649-5-3-3.

6. The director shall have authority to grant an exception to the hearing requirements of R649-5-1-1 for water disposal wells provided disposal is into a formation or interval that is not currently nor anticipated to be an underground source of drinking water and provided that no objection is received pursuant to R649-5-3-3.

R649-5-4. Aquifer Exemption.

1. The board may, after notice and hearing and subject to the EPA approval, authorize the exemption of certain aquifers from classification as an USDW based upon the following findings:

Hand Drawn Diagram of 2/2/98  
"Fluids Information" Statement

OK Form 1 and hand drafted graph  
"Fracture Gradient Analysis 1-14-98"  
Hand drafted Proc Gradient Analysis of 1/14/98

Geologic Information Statement insufficient!!

NONE in radius

**COLUMBIA GAS**  
Development



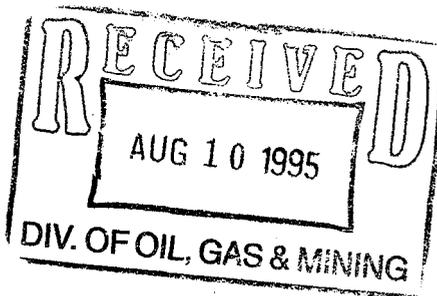
August 7, 1995

VIA AIRBORNE EXPRESS

Bureau of Land Management  
82 E. Dogwood  
Moab, Utah 84532

Attention: Eric Jones

Reference: NTL-4A Flaring Extension  
Columbia Gas Development Corporation  
Kane Springs Federal Unit  
Wells No. 25-19-34-1, 27-1, 19-1A ST, 16-1 and  
10-1  
Grand County, Utah



Dear Mr. Jones:

42-019.31241  
Sec 16, T25S, R18E

Columbia Gas Development Corporation (CGDC) respectfully requests an additional one year extension under NTL-4A to flare or vent associated gas produced from the above-referenced wells.

Currently, the five wells on federal land within the Unit are producing a total of approximately 293 BOPD and 202 MCF of gas per day. A graph displaying the cumulative production curves through July 1, 1995, for the five wells is attached. We anticipate that the production from the wells will continue to decline. CGDC will continue to periodically perform well work which will result in temporary increases in the oil and gas production rates, as evidenced by the graph.

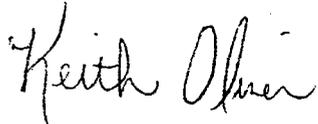
During the period of the one year extension, CGDC does not anticipate drilling any additional wells or attempting any redrilling or recompletion of the non-producing wells within the Unit.

Since it is the goal of the BLM, the Utah Board of Oil, Gas, and Mining, and CGDC to have both the BLM's and State of Utah's flaring authorizations be concurrent and essentially identical, we request that you communicate your decision to Mr. R. J. Firth of the Utah Division of Oil, Gas and Mining prior to September 1, 1995, so that the staff may advise the Board of your decision at their September meeting.

Should you have any questions, or require additional information, please contact either myself, at 713/871-3338, Wendy DesOrmeaux at 713/871-3482.

Very truly yours,

COLUMBIA GAS DEVELOPMENT CORPORATION

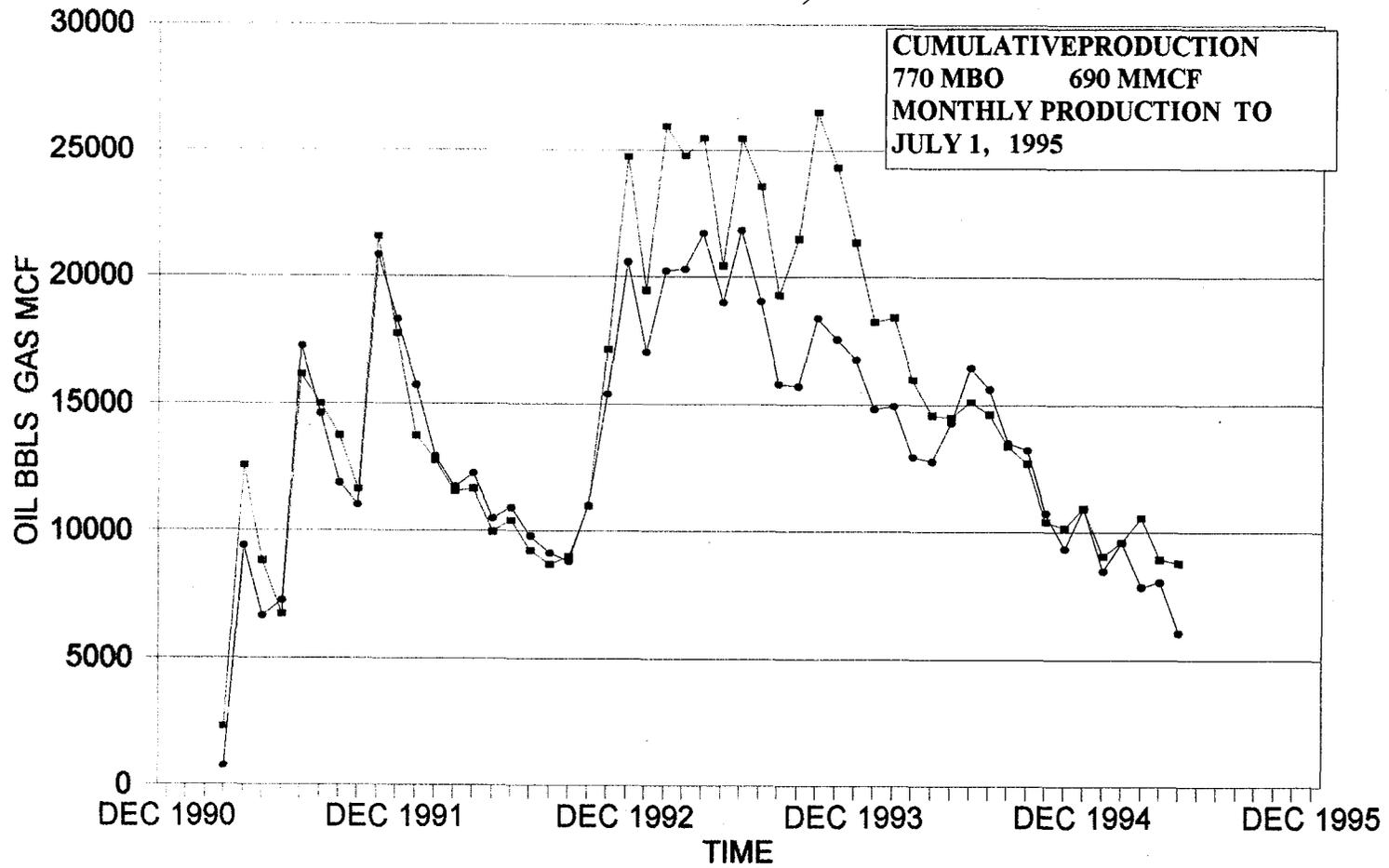
A handwritten signature in cursive script that reads "Keith Oliver".

Keith Oliver  
Regulatory Clerk

KTO  
Attachments

cc: R. J. Firth; Division of Oil, Gas & Mining  
Bob Pruitt; Pruitt, Gushee & Bachtell

# KANE SPRINGS TOTAL PRODUCTION GRAND COUNTY, UTAH



—■— OIL BBLs    —●— GAS MCF

# MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

SONJA ROLFES  
 COLUMBIA GAS DEVELOPMENT  
 PO BOX 1350  
 HOUSTON TX 77251

UTAH ACCOUNT NUMBER: N5035

REPORT PERIOD (MONTH/YEAR): 6 / 96

AMENDED REPORT  (Highlight Changes)

Well Name			Producing Zone	Well Status	Days Oper	Production Volumes		
API Number	Entity	Location				OIL(BBL)	GAS(MCF)	WATER(BBL)
✓ 4301931341	11484	25S 18E 16	CNCR			- mL44333	(Bond OK)	Kane Springs 5k / Nov 96
✓ 4301931334	11521	25S 19E 34	CNCR			- u53624		"
4301931332	11670	26S 19E 20	CNCR			- letk54637	Sand	"
<b>TOTALS</b>								

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

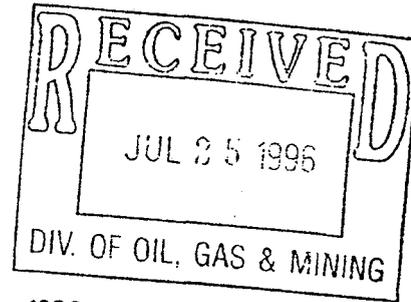
I hereby certify that this report is true and complete to the best of my knowledge. Date: \_\_\_\_\_  
 Name and Signature: \_\_\_\_\_ Telephone Number: \_\_\_\_\_



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155



IN REPLY REFER TO  
3100  
U-968 et al  
(UT-932)

JUL 23 1996

### NOTICE

Aviara Energy Corporation : Oil and Gas  
P.O. Box 1350 : U-968 et al  
Houston, Texas 77251-1350 :

### Name Change Recognized

Acceptable evidence has been received in this office concerning the change of name of Columbia Gas Development Corporation to Aviara Energy Corporation on Federal oil and gas leases.

For our purposes, the name change is recognized effective May 1, 1996 (Secretary of State's approval date).

The oil and gas lease files identified on the enclosed exhibit have been noted as to the name change. We are notifying the Minerals Management Service and all applicable Bureau of Land Management offices of the name change by a copy of this notice. If additional documentation for changes of operator is required by our Field Offices, you will be contacted by them.

Due to the name change, the name of the principal on the bond is required to be changed from Columbia Gas Development Corporation to Aviara Energy Corporation on Bond No. U-391050-16RR (BLM No. CO0356). A rider effecting this change has been submitted to the Colorado State Office of the BLM, which holds this nationwide bond.

**ROBERT LOPEZ**

Group Leader,  
Minerals Adjudication Group

### Enclosure

Exhibit (1 p.)

bc: Lisha Cordova, State of Utah, Division of Oil, Gas and Mining, P.O. Box 145801, Salt Lake City, Utah 84114-5801  
MMS-Data Management Division, MS 3113, P.O. Box 5860, Denver, CO 80217  
Moab District Office  
Vernal District Office  
Teresa Thompson (UT-931)  
Irene Anderson (UT-932)

Exhibit of Leases

U-968  
U-6911  
U-15051  
U-26467  
U-28212  
U-31736  
U-34023  
U-37116  
U-46693  
U-46697  
U-47858  
U-49964  
U-50393  
U-50678  
U-50683  
U-50687  
U-51239  
U-51636  
U-51826  
U-60780 (CA)  
UTU-67755X (Kane Springs Unit)

U-52277  
U-52641  
U-53624  
U-53626  
U-54037  
U-55510  
U-58517  
U-60530  
U-61182  
U-61588  
U-62181  
U-62679  
U-62832  
U-62833  
U-62906  
U-63127  
U-63128  
UTU-64538  
UTU-64927  
U-60783 (CA)

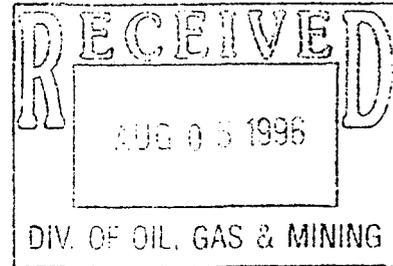
UTU-65329  
UTU-65795  
UTU-65971  
UTU-65972  
UTU-65973  
UTU-66020  
UTU-66025  
UTU-66849  
UTU-67132  
UTU-67552  
UTU-67558  
UTU-67854  
UTU-68116  
UTU-68117  
UTU-68118  
UTU-68122  
UTU-68232  
UTU-68342  
UTU-69029  
UTU-73405

# Aviara Energy Corporation

VIA AIRBORNE EXPRESS

2 August 1996

State of Utah - Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114



**Re: Notification of Name Change from "Columbia Gas Development Corporation" to "Aviara Energy Corporation".**

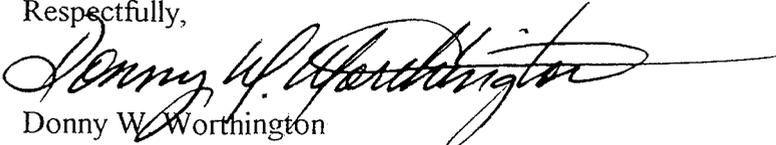
Dear Sirs;

Attached please find documents relating to our company name change from "Columbia Gas Development Corporation" to "Aviara Energy Corporation". I have attached our surety bond rider showing the name change of the principal as well as documents relating to the Corporate name change. These Corporate name change documents contain a Certificate of Corporate Resolution, a Certificate of Amendment of Certificate of Incorporation by the Secretary of State of the State of Delaware evidencing a change of name effective April 30, 1996 from "Columbia Gas Development Corporation" to "Aviara Energy Corporation" and an amended Certificate of Incumbency in accordance with the regulations concerning qualifications of corporations holding Federal leases. I have also attached a list of wells and their locations that will be affected by the name change.

We hereby formally request your acceptance of this rider, and thus, our name change. Please sign the rider and return the appropriate copies to Aviara Energy Corporation (attn: Mr. Dean Roy). Also, please have your office make the necessary changes in your records to reflect this name change at this time.

Should you have questions or require additional information, please feel free to call me at (713) 871-3631. Thank you.

Respectfully,

  
Donny W. Worthington  
Manager, Environmental, Safety & Regulatory

DWW/  
attachments:

UTAH

GRAND COUNTY

KANE SPRINGS FIELD

LOCATION

Kane Springs Federal #10-1	10-25S-18E
Kane Springs Federal Unit #16-1	16-25S-18E
Kane Springs Federal #19-1A	19-26S-20E
Kane Springs Federal #27-1	27-25S-19E
Kane Springs Federal #34-1	34-25S-19E
<i>Kane Springs Fed. 28-1</i>	<i>28-25S-19E</i>
<i>Kane Springs Fed. 20-1</i>	<i>20-26S-19E</i>

SAN JUAN COUNTY

LISBON FIELD

Government Evelyn Chambers #1 (T&Ad)  
Government Evelyn Chambers #2 (T&Ad)

UINTAH COUNTY

HORSESHOE BEND FIELD

WELL

LOCATION

Alta 5-1-B	5-7S-21E
Alta 5-2-C	5-7S-21E
Cowden 31-3-C	31-6S-21E
Federal 33-3-J	33-6S-21E
Federal 33-6-F	33-6S-21E
Federal 33-7-L	33-6S-21E
Federal 33-8-N	33-6S-21E

CERTIFICATE

I, Robert C. Sylvester, Assistant Secretary of Aviara Energy Corporation, a corporation organized and existing under the laws of the State of Delaware, do hereby certify that the attached document titled Certificate of Amendment of Certificate of Incorporation is a true and correct copy of the Certificate of Amendment of Certificate of Incorporation filed in the Secretary of State of the State of Delaware's office on April 30, 1996.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of said Corporation this

5<sup>th</sup>

day of July, 1996.



Robert C. Sylvester  
Assistant Secretary

CORPORATE SEAL

Office of the Secretary of State

---

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "COLUMBIA GAS DEVELOPMENT CORPORATION", CHANGING ITS NAME FROM "COLUMBIA GAS DEVELOPMENT CORPORATION" TO "AVIARA ENERGY CORPORATION", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF APRIL, A.D. 1996, AT 1:15 O'CLOCK P.M.



A handwritten signature in cursive script, reading "Edward J. Freel".

---

Edward J. Freel, Secretary of State

0735923 8100

000125685

AUTHENTICATION:

DATE:

7928485

05-01-96

STATE OF DELAWARE  
SECRETARY OF STATE  
DIVISION OF CORPORATIONS  
FILED 01:15 PM 04/30/1996  
960124621 - 735923

CERTIFICATE OF AMENDMENT  
OF  
CERTIFICATE OF INCORPORATION  
OF  
COLUMBIA GAS DEVELOPMENT CORPORATION

Columbia Gas Development Corporation (the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: That the Certificate of Incorporation of Columbia Gas Development Corporation is amended by amending Article First thereof to read in its entirety as follows:

"FIRST: The name of the corporation (hereinafter called "the Corporation") is Avlara Energy Corporation."

SECOND: That said amendment was duly adopted in accordance with the provisions of §242 of the General Corporation Law of the State of Delaware and has been consented to in writing by the sole stockholder in accordance with §228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Columbia Gas Development Corporation has caused this Certificate to be signed by Larry J. Bainter, its Treasurer this 29th day of April 1996.

*Exec. President*  
*[Signature]*

COLUMBIA GAS DEVELOPMENT CORPORATION

By: *[Signature]*  
Name: Larry J. Bainter

## CERTIFICATE

The undersigned hereby certifies that he is Assistant Secretary of Aviara Energy Corporation, a Delaware corporation (the "Corporation"), that on the 19th day of June, 1996 by Unanimous Consent of the Board of Directors of the Corporation in Lieu of Special Meeting, pursuant to Section 141(f) of the Delaware Corporation Law, the following resolutions were adopted, with the same force and effect as though adopted at a Special Meeting of the Board of Directors of the Corporation duly called and held, that such resolutions are now in full force and effect, and that said resolutions have not been amended or rescinded:

RESOLVED, that, the Chairman and Chief Executive Officer, the President and Chief Operating Officer, the Vice Presidents and the Secretary of the Corporation, be and each of them is hereby authorized and empowered, without the joinder of any other officer of the Corporation, to execute for and on behalf of the Corporation, any and all bids for leases from the United States of America, through the Minerals Management Service (Department of Interior), of any tract or tracts owned by the United States of America, located in either onshore or offshore areas, including tracts in the Outer Continental Shelf, as may at any time, and from time to time, heretofore have been offered or hereafter may be offered for lease by the United States of America, all on such terms and conditions as may be specified in any such offer to lease and on such terms and conditions and for such consideration as the aforementioned officers of the corporation, or any one of them, may deem proper and advisable; and to further execute on behalf of the Corporation all agreements and other instruments (including, without limitation, applications, bids, leases, bonds, assignments, relinquishments, prospecting permits, division and transfer orders, guarantees, indemnities, designations of operator, unitization agreements, operating agreements, liquids commingling agreements, general correspondence and any other documents) which may be necessary, useful or expedient at any time in carrying on the business of the Corporation involving any such lease or asset with the United States of America or any agency, bureau or department thereof; and

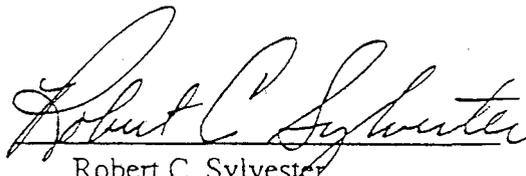
RESOLVED, that, any of such officers is further authorized and empowered to sell, assign, transfer, convey and deliver, in the name and on behalf of the Corporation any or all right, title and interest of any character in any lease or asset now owned or hereafter acquired by the Corporation covering any tract or tracts owned by the United States of America, or obtained or used in connection therewith, wherever located, for such prices and upon such terms and conditions as shall be approved by the Board of Directors; and

RESOLVED, that, the Chairman and Chief Executive Officer, the President and Chief Operating Officer, the Vice Presidents and the Secretary of the Corporation, be, and each of them is, hereby authorized and empowered, without the joinder of any other officer of the Corporation, to execute for and on behalf of the Corporation, any and all agreements and other instruments (including without limitation assignments of mining leases, prospecting permits, letter agreements,

consent forms, applications and approval letters) with the Tribe(s) of the Fort Peck Reservation and the Three Affiliated Tribes of the Fort Berthold Indian Reservation or any agency, bureau or department thereof, or any agency, bureau or department of the United States of America concerning same on such terms and conditions as may be specified and for such consideration as he may deem proper and advisable which may be necessary, useful or expedient at any time in carrying on the business of the Corporation upon the aforementioned Reservations; and

RESOLVED, that, the foregoing resolutions be deemed, and are effective, for all purposes as of April 30, 1996.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed the seal of the Corporation this 5<sup>th</sup> day of July, 1996.

  
Robert C. Sylvester  
Assistant Secretary

CORPORATE SEAL

STATE OF TEXAS       §  
                                  §  
COUNTY OF HARRIS   §

STATEMENT OF AVIARA ENERGY CORPORATION

The undersigned, Robert C. Sylvester, Assistant Secretary of Aviara Energy Corporation, being first duly sworn on his oath, states that the following is correct to the best of his knowledge.

1.    State of Incorporation. Aviara Energy Corporation is incorporated in the State of Delaware.
  
2.    Authorization to hold oil and gas leases on OCS and other federal lands. Aviara Energy Corporation is authorized to hold oil and gas leases on the Outer Continental Shelf, on other federal lands, including onshore lands, and on tribal lands administered by the Bureau of Indian Affairs or other agency.

Dated this 5<sup>th</sup> day of July, 1996.

AVIARA ENERGY CORPORATION

By: Robert C. Sylvester  
Robert C. Sylvester  
Assistant Secretary

CORPORATE SEAL

SUBSCRIBED AND SWORN TO before me this 5<sup>th</sup> day of July, 1996.

Carolyn Oliver  
Notary Public, State of Texas

 CAROLYN OLIVER  
NOTARY PUBLIC, STATE OF TEX.  
MY COMMISSION EXPIRES  
JULY 19, 1997

CERTIFICATE OF INCUMBENCY

I, Robert C. Sylvester, Assistant Secretary of Aviara Energy Corporation, a Delaware corporation (the "Company"), do hereby certify that the following named persons now are, and at all times on and subsequent to April 30, 1996, have been duly elected or appointed, qualified and acting officers of the Company holding the offices set after their respective names as follows:

Tracy W. Krohn	Chairman and Chief Executive Officer
James L. Parker	President and Chief Operating Officer
David M. McCubbin	Vice President
Gary J. Mabie	Vice President
Ken Fagan	Vice President
Robert C. Sylvester	Treasurer and Assistant Secretary
Ivan Irwin, Jr.	Secretary
Jere F. Freel	Assistant Secretary

IN WITNESS WHEREOF, I have executed this Certificate and affixed the seal of the Company this 3rd day of July, 1996.

  
Robert C. Sylvester, Assistant Secretary

CORPORATE SEAL

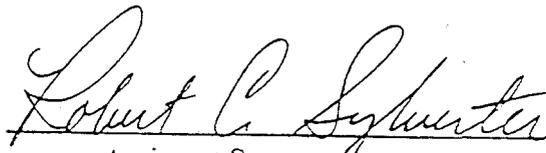
CERTIFICATE

I, Robert C. Sylvester, on behalf of Aviara Energy Corporation, (hereinafter called the "Company"), hereby certify that I am an Assistant Secretary of the Company and that:

The following officers and employees are authorized to execute leases, bids for leases, offers to lease, subleases, permits, licenses, applications therefor, assignments thereof, and requests for approval thereof, and other similar documents and to act on behalf of the Company in such matters.

<u>Name</u>	<u>Office/Title</u>
Tracy W. Krohn	Chairman and Chief Executive Officer
James L. Parker	President and Chief Operating Officer
Gary J. Mabie	Vice President
David M. McCubbin	Vice President
Ken Fagan	Vice President
Ivan Irwin, Jr.	Secretary

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of the Company  
this 5<sup>th</sup> day of July, 1996.

  
Assistant Secretary

CORPORATE SEAL

# OPERATOR CHANGE WORKSHEET

Routing	
1-MBC ✓	6-DEC ✓
2-GRV/EXT ✓	7-KDR ✓
3-DTS ✓	8-SJ ✓
4-VLD ✓	9-FILE
5-RJF ✓	

Attach all documentation received by the division regarding this change.  
Initial each listed item when completed. Write N/A if item is not applicable.

- Change of Operator (~~well sold~~)       Designation of Agent  
 Designation of Operator       Operator Name ~~Change Only~~

The operator of the well(s) listed below has changed, effective: 5-1-96

**TO: (new operator)** AVIARA ENERGY CORPORATION  
 (address) PO BOX 1350  
HOUSTON TX 77251  
 Phone: (713)871-3400  
 Account no. N5500 (8-6-96)

**FROM: (old operator)** COLUMBIA GAS DEVELOPMENT  
 (address) PO BOX 1350  
HOUSTON TX 77251  
 Phone: (713)871-3400  
 Account no. N5035

WELL(S) attach additional page if needed:

**\*KANE SPRINGS UNIT  
C.A. UTU60783**

Name: <b>**SEE ATTACHED**</b>	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____
Name: _____	API: _____	Entity: _____	S _____	T _____	R _____	Lease: _____

## OPERATOR CHANGE DOCUMENTATION

- N/A 1. (r649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator (attach to this form).
- See 2. (r649-8-10) Sundry or other legal documentation has been received from the **NEW** operator (Attach to this form). (Reg. 7-25-96) (Per'd 8-5-96)
- See 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is the company registered with the state? (yes/no) no If yes, show company file number: 02-081180 (1st 5-8-96)
- See 4. **FOR INDIAN AND FEDERAL WELLS ONLY.** The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of **Federal and Indian** well operator changes should ordinarily take place prior to the division's approval, and before the completion of steps 5 through 9 below.
- See 5. Changes have been entered in the Oil and Gas Information System (3270) for each well listed above. (8-6-96)
- See 6. Cardex file has been updated for each well listed above. (8-6-96)
- See 7. Well file labels have been updated for each well listed above. (8-6-96)
- See 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. (8-6-96)
- See 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

**ENTITY REVIEW**

- Yes 1. (r649-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) no \_\_\_\_ If entity assignments were changed, attach copies of Form 6, Entity Action Form.
- N/A 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been notified through normal procedures of entity changes.

**BOND VERIFICATION - (FEE WELLS ONLY)**

- Yes 1. (r649-3-1) The NEW operator of any fee lease well listed above has furnished a proper bond. *Trust Lands/Reid Bond Rider "Columbia to Aviare"*  
*\* Reid "Rider" 8-5-96; bond no. chgd to U274145L*  
*80,000 Aviare Energy Corporation, United Pacific Ins.*
- \_\_\_\_ 2. A copy of this form has been placed in the new and former operator's bond files. *\* Upon Compl. of routing.*
- N/A 3. The FORMER operator has requested a release of liability from their bond (yes/no) \_\_\_\_\_, as of today's date \_\_\_\_\_. If yes, division response was made to this request by letter dated \_\_\_\_\_.

**LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY**

- \_\_\_\_ 1. Copies of documents have been sent on \_\_\_\_\_ to \_\_\_\_\_ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.

**FILMING**

- VDR 1. All attachments to this form have been microfilmed. Today's date: August 21, 1996

**FILING**

- \_\_\_\_ 1. Copies of all attachments to this form have been filed in each well file.
- \_\_\_\_ 2. The original of this form, and the original attachments are now being filed in the Operator Change file.

**COMMENTS**

760725 BLM/SL Aprv. rH. 5-1-96.

**SPEED LETTER**

To: Ed Bonner

From: Don Staley

School & Institutional Trust

Division of Oil, Gas & Mining

Lands Administration

Subject: Operator Change

MESSAGE

Date Aug 16 19 96

Ed,

For your information, attached are copies of documents regarding an operator change on a state lease(s)

These companies have complied with our requirements. Our records have been updated. Bonding should be reviewed by your agency ASAP.

**Former Operator:** Columbia Gas Development (N5035)

**New Operator:** Aviara Energy Corporation (N5500)

Well(s):	API:	Entity:	S-T-R:	Lease:
Kane Springs 16-1	43-019-31341	11484	16-25S-18E	ML-44333

cc: Operator File

Signed

*Don Staley*

REPLY

Date \_\_\_\_\_ 19 \_\_\_\_

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. Lease Designation and Serial Number: ML-44333
		6. If Indian, Allocated or Tribe Name: N/A
Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.		7. Unit Agreement Name: Kane Springs Federal Unit
		8. Well Name and Number: Kane Springs Unit 16-1
1. Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER: <input type="checkbox"/>	9. API Well Number: 43 019 31341	
2. Name of Operator: Aviara Energy Corporation	10. Field and Pool, or Wildcat: Wildcat	
3. Address and Telephone Number: P. O. Box 1350, Houston, TX 77251-1350 713/871-3444	County: Grand State: Utah	
4. Location of Well Footages: 960' FSL & 1960' FWL QQ, Sec., T., R., M.: SE SW Sec. 16-T25S-R18E		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)	SUBSEQUENT REPORT (Submit Original Form Only)
<input checked="" type="checkbox"/> Abandon <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input checked="" type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____	<input type="checkbox"/> Abandon <input type="checkbox"/> Repair Casing <input type="checkbox"/> Change of Plans <input type="checkbox"/> Convert to Injection <input type="checkbox"/> Fracture Treat or Acidize <input type="checkbox"/> Other _____
<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recomplete <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Reperforate <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off
Approximate date work will start <u>1/2/98</u>	Date of work completion _____
<small>Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form. * Must be accompanied by a cement verification report.</small>	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

- Abandon Clastic 19 zone at 6830'-78' by setting plug in packer at 6710'.
- Test upper zones above Paradox Salt at 4300' for injectivity. First Interval to be tested is 3670'-3720', then if needed, 3580'-3600', 3264'-78', 2538'-52'.
- If interval can be found with injectivity, swab zone for fluid analysis and submit application to convert well to a SWD well.

This well is currently producing less than 5 BOPD and is considered to be uneconomical.

13. Name & Signature: Victoria Guidry *Victoria Guidry* Title: Prod/Regulatory Coord. Date: 12/8/97

(This space for State use only)

**\* APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING**  
 DATE: 12-28-97  
 BY: [Signature]

\* See attached conditions

Utah Division of Oil, Gas and Mining

Attachment to **Sundry Notice and Report on Wells**  
dated December 8, 1997.

Subject: Request of Aviara Energy Corp. for permission to  
abandon current producing zone and test shallower zones  
for injectivity.  
Kane Springs Unit 16-1 Well  
SE/SW sec. 16, T25S, R18E, Grand, County  
API = 43-019-31341

**Conditions of Approval:**

- attempt to attain representative water sample from  
target zones, report and discuss results with the  
Division prior to proceeding with injectivity testing

Note: The Division has concerns about disposal into  
formations above the Paradox salt due to known  
faulting and jointing in the area especially near  
the crest of the Cane Creek anticline. This  
subject will require attention should Aviara  
choose to pursue an injection permit.

# BOREHOLE COMPENSATED SONIC LOG

**Schlumberger**

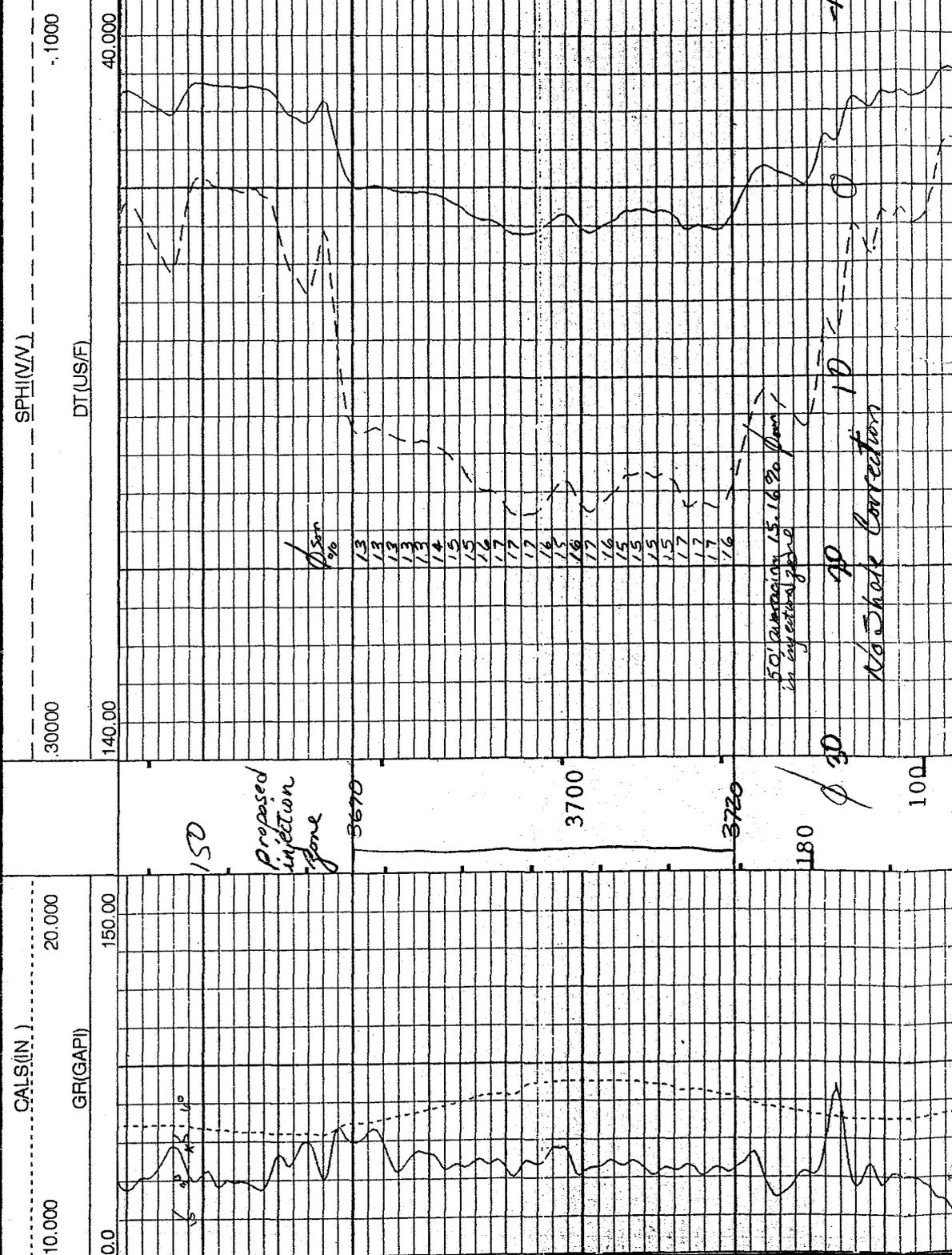
1460261022  
K3019261022

<b>COMPANY</b> Coastal Oil and Gas Corporation	
<b>WELL</b> Kane Springs Unit #16-1 <b>RUN # 1</b>	
<b>FIELD</b> Wildcat <b>TO SALT</b>	
<b>COUNTY</b> Grand <b>STATE</b> Utah	
<b>LOCATION</b> 1960 FWL & 960 FSL SE SW	<b>Other Services:</b> DLL BHC
<b>API SERIAL NO.</b> N/A	<b>SECT.</b> 16 <b>TWP.</b> 25 S <b>RANGE</b> 18 E
<b>Permanent Datum</b> GL <b>Elev.</b> 5142.0 F <b>Elev.: K.B.5164.0 F</b>	<b>Measured From</b> KB <b>22.0 F above Perm. Datum</b> <b>D.F.</b>
<b>Log Measured From</b> KB	<b>G.L.5142.0 F</b>

<b>Date</b>	August 28, 1993		
<b>Log No.</b>	One		
<b>Log Depth</b>	4995.0 F		
<b>Log Interval</b>	4962.0 F		
<b>Log Interval</b>	823.0 F		
<b>Log-Driller</b>	13 3/8 @ 823.0 F	@	@
<b>Log-Logger</b>	823.0 F		
<b>Log Size</b>	12 1/4 @ 4995.0 F	@	@

<b>Fluid in Hole</b>	Salt Water		
<b>Visc.</b>	8.20 LB/G		
<b>Fid. Loss</b>			
<b>Temperature of Sample</b>			
@ Meas. Temp.	.414 OHMM @ 94.0 DEGF	@	@
@ Meas. Temp.	@	@	@
@ Meas. Temp.	@	@	@
<b>Resistance: Rmf   Rmc</b>			
@ BHT	.292 OHMM @ 136. DEGF	@	@
<b>Circulation Ended</b>	8-28 @ 1700		
<b>Logger on Bottom</b>	8-28 @ 2200		
<b>Rec. Temp.</b>	136. DEGF		
<b>Location</b>	8206	Farmington	
<b>Recorded By</b>	Sitton		
<b>Processed By</b>	Nichols & Brown		

TIGHT HOLE



Case Spring unit 16-1, 16-T255, R18E

To: Dan Jarvis

43-019-31341

**Saturation Index Calculations**  
 Champion Technologies, Inc.  
 (Based on the Tomson-Oddo Model)

**Site Information**

Company	Aviara Energy Corp.
Field	Aviara <i>KS 16-1 Inj. Zone 3670-3720'</i>
Point	Aviara
Date	1/12/98

**Water Analysis (mg/L)**

Calcium	19,970
Magnesium	4,082
Barium	0
Strontium	0
Sodium*	49641
Bicarbonate Alkalinity	122
Sulfate	960
Chloride	123,000

**Appended Data**

CO2	320 mg/L
H2S	0 mg/L
Iron	39 mg/L
TDS	197775 mg/L

\* - Calculated Value

**Physical Properties**

Ionic Strength*	4.17
pH*	6.53
Temperature	85°F
Pressure	100 psia

\* - Calculated Value

**Calcite Calculation Information**

Calculation Method	Value
CO2 in Brine	120 mg/L
Bicarbonate Alkalinity Correction(s)	Value
None Used	

**SI & PTB Results**

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	0.02	1.6
Gypsum (Calcium Sulfate)	0.12	113.0
Hemihydrate (Calcium Sulfate)	0.10	82.5
Anhydrite (Calcium Sulfate)	0.24	160.8
Barite (Barium Sulfate)	N/A	N/A
Celestite (Strontium Sulfate)	N/A	N/A

*Handwritten initials*

**Ranged Data**  
Champion Technologies, Inc.

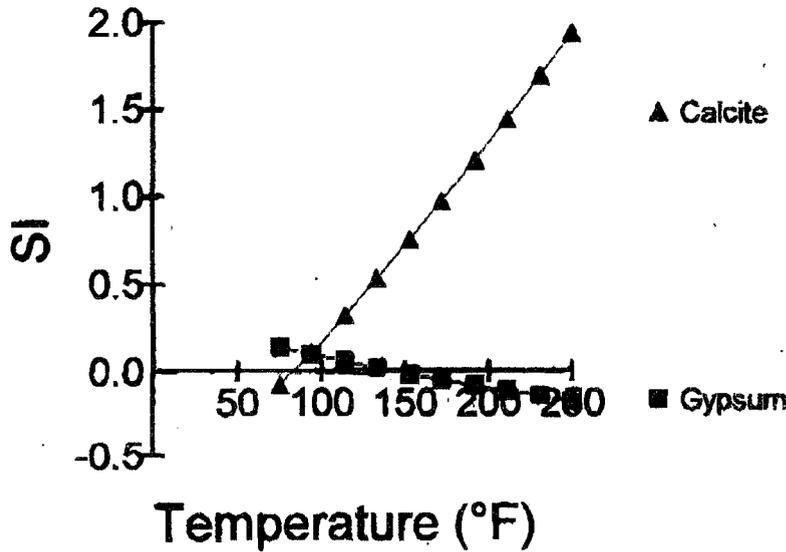
**Site Information**

Company	Aviara Energy Corp.
Field	Aviara
Point	Aviara
Date	1/12/98

**SI Results**

Temperature (°F)	Calcite	Gypsum
75	-0.08	0.14
94	0.11	0.10
114	0.32	0.06
133	0.53	0.02
153	0.75	-0.02
172	0.97	-0.05
192	1.20	-0.09
211	1.43	-0.12
231	1.68	-0.15
250	1.93	-0.18

**SI**



BT



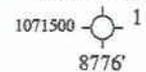
# R 18 E

8

9

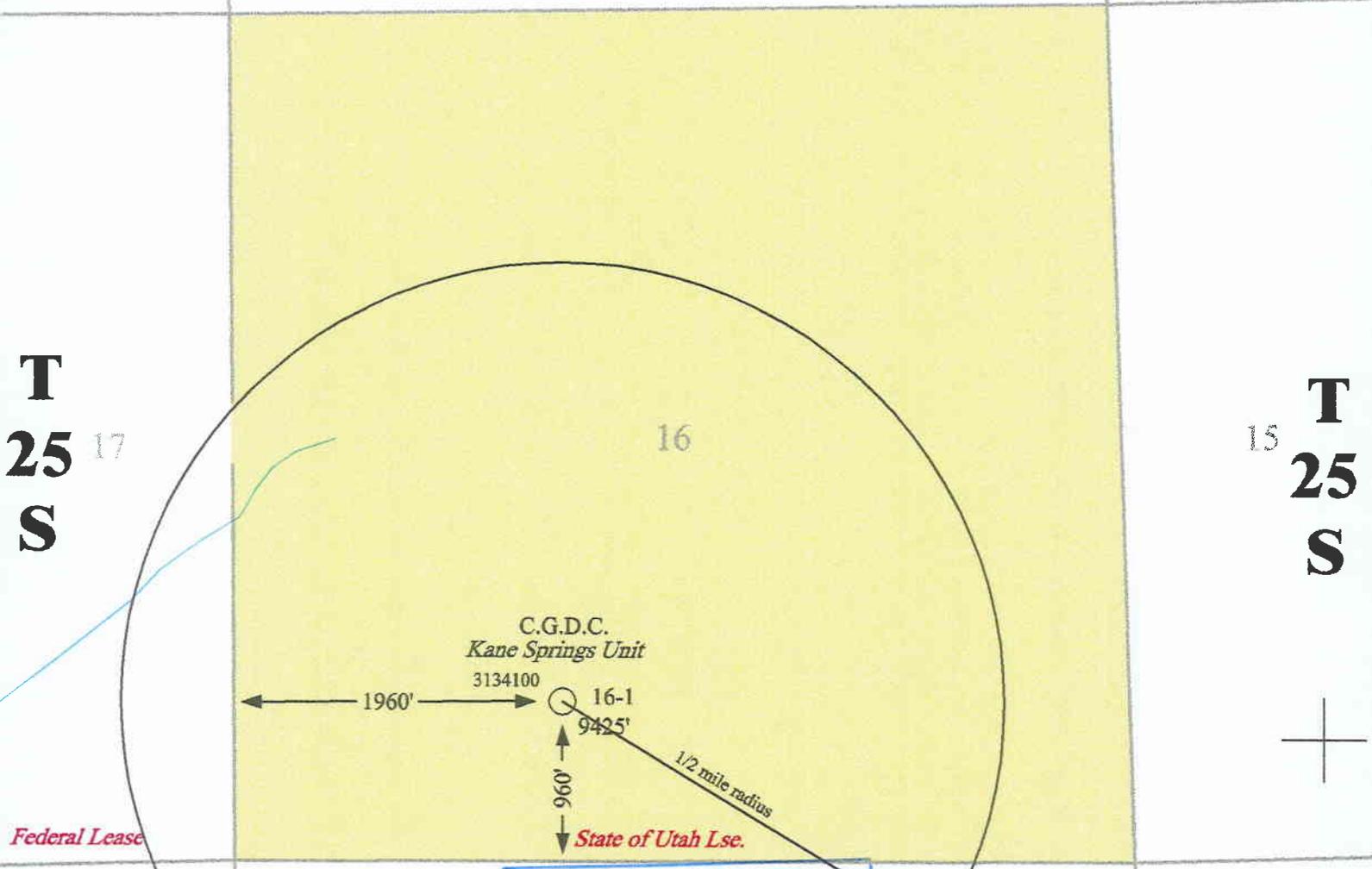
10

MCRAE OIL & GAS CORP  
*Mcrae - Federal*



# T 25 S

# T 15 25 S



C.G.D.C.  
*Kane Springs Unit*

3134100

16-1

9425'

1960'

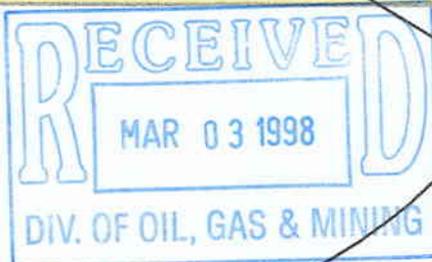
16

21

also  
649-5-2-2.11

*Federal Lease*

*State of Utah Lse.*



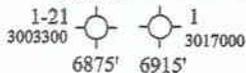
SHELL  
*Federal*

3004300 1-20

7856'

20

SHELL READ & STEVENS INC  
*Federal Shenandoah - Bowknot*



649-5-2-2.1

*Federal Lease*

*Federal Lease*

**ALL LEASES OPERATED BY AVIARA ENERGY**

# AVIARA

**Energy Corporation**

**KANE SPRINGS  
GRAND COUNTY, UTAH**

**Proposed  
SALT WATER DISPOSAL WELL**

SCALE: 1"=1000'

INTERP. BY: M.D. SWISHER DATE: 5-FEB-98

DRAFTED BY: G.D.P. CADFILE: knsp\_16-1\_dsp1

ACCT: wu1 NLEFILE: knspcrs2 ROT: 1.07040

# KANE SPRINGS FEDERAL UNIT #16-1 PROPOSED SWD

## FLUIDS INFORMATION

649-5-2-2.6

The fluid to be injected into the proposed SWD well is produced salt water. This salt water is produced from oil wells in the area that are completed in the Cane Creek formation (Clastic 23 of the Paradox sequence) from 7400-8200' TVD. A sample of this produced water was analyzed, and the results are included with this application. Presently, these wells produce a cumulative of about 65 BWPD that would be injected into this disposal well. Since this water would be trucked to the well site, disposal volumes will vary from day to day, but would average about 65 BWPD at present. A sample of native formation water was swabbed from this well and analyzed. The results of this analysis and the compatibility of the produced water to the native water are included with this application. The combination of the two fluids has the possibility of scaling tendencies, but since we are treating our produced water with a scale inhibitor prior to disposal, there should be no problem with scaling.

## GEOLOGICAL INFORMATION

The proposed injection zone of 3670-3720' lies within the Honaker Trail (Pennsylvanian age) formation of the Paradox Basin. The injection zone appears to be a silty limestone that is bounded on the top by a 40' low porosity (2-4%) tight zone. Below the injection zone we have a 100' no porosity tight zone, which acting with the upper tight zone create a natural barrier for our injection zone. It is believed that this porosity has decent lateral extent because it is also present in Shell's Federal #20-1 about 3700' to the southwest.

649-5-2-2.10

This proposed injection zone lies some 3100' below the base of the Wingate sandstone formation. The Wingate is an aquifer in the Grand County area, but with this amount of vertical separation, communication is not probable. Reference: Ground-Water Conditions in the Grand County Area, Utah, with Emphasis on the Mill Creek-Spanish Valley Area (Technical Publication No. 100, State of Utah, Department of Natural Resources, 1990).

AVIARA ENERGY CORPORATION

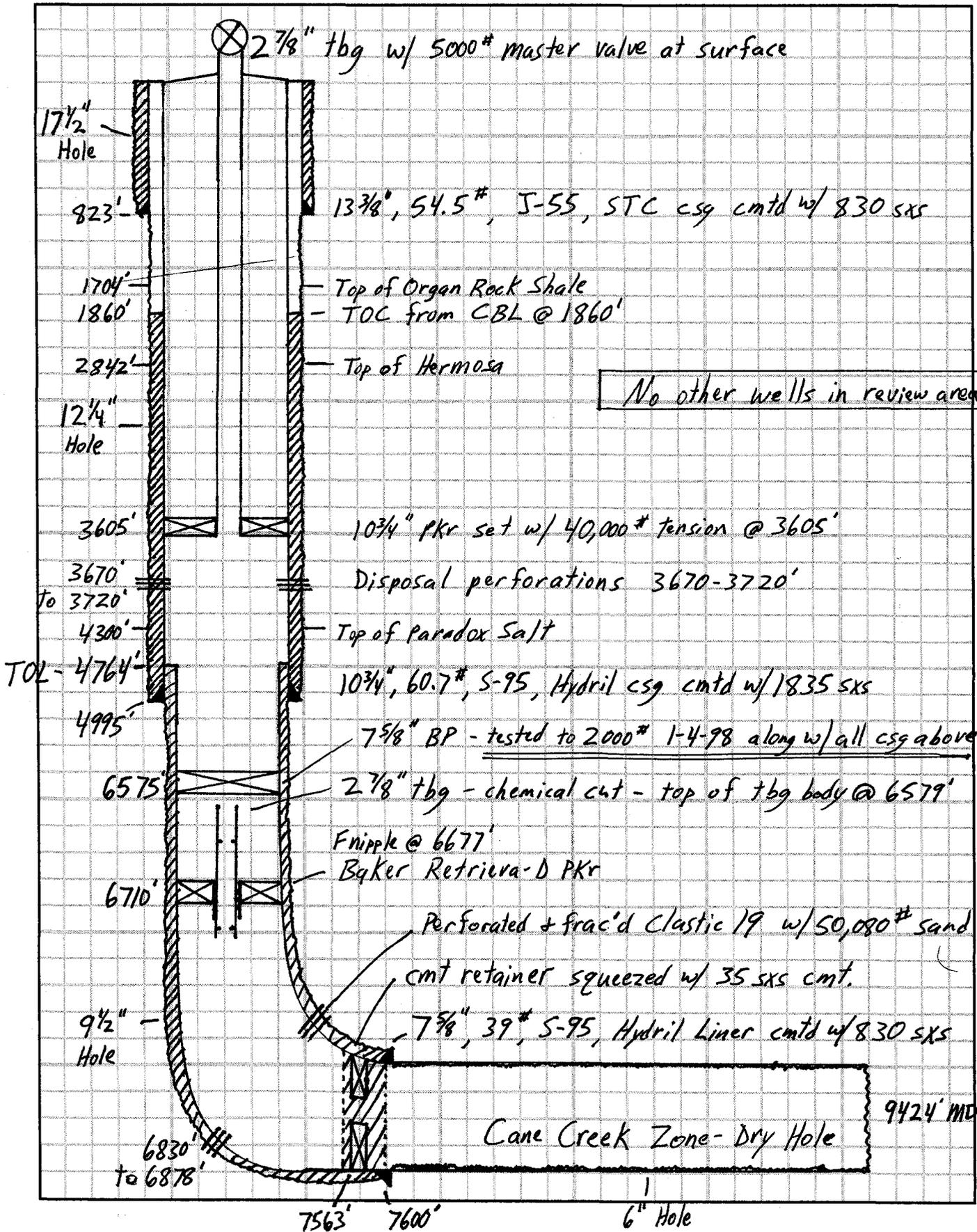
SUBJECT Kane Springs Federal Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

AFE NO. \_\_\_\_\_

Wellbore diagram for proposed SWD

BY MDS DATE 2-2-98



SUBJECT Kane Springs Federal Unit #16-1 PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 (lower interval @ 6830') AFE NO. \_\_\_\_\_  
Fracture Gradient Analysis From Frac Job 11/6/93 DATE \_\_\_\_\_

10ppg gel used for Flush after Frac job

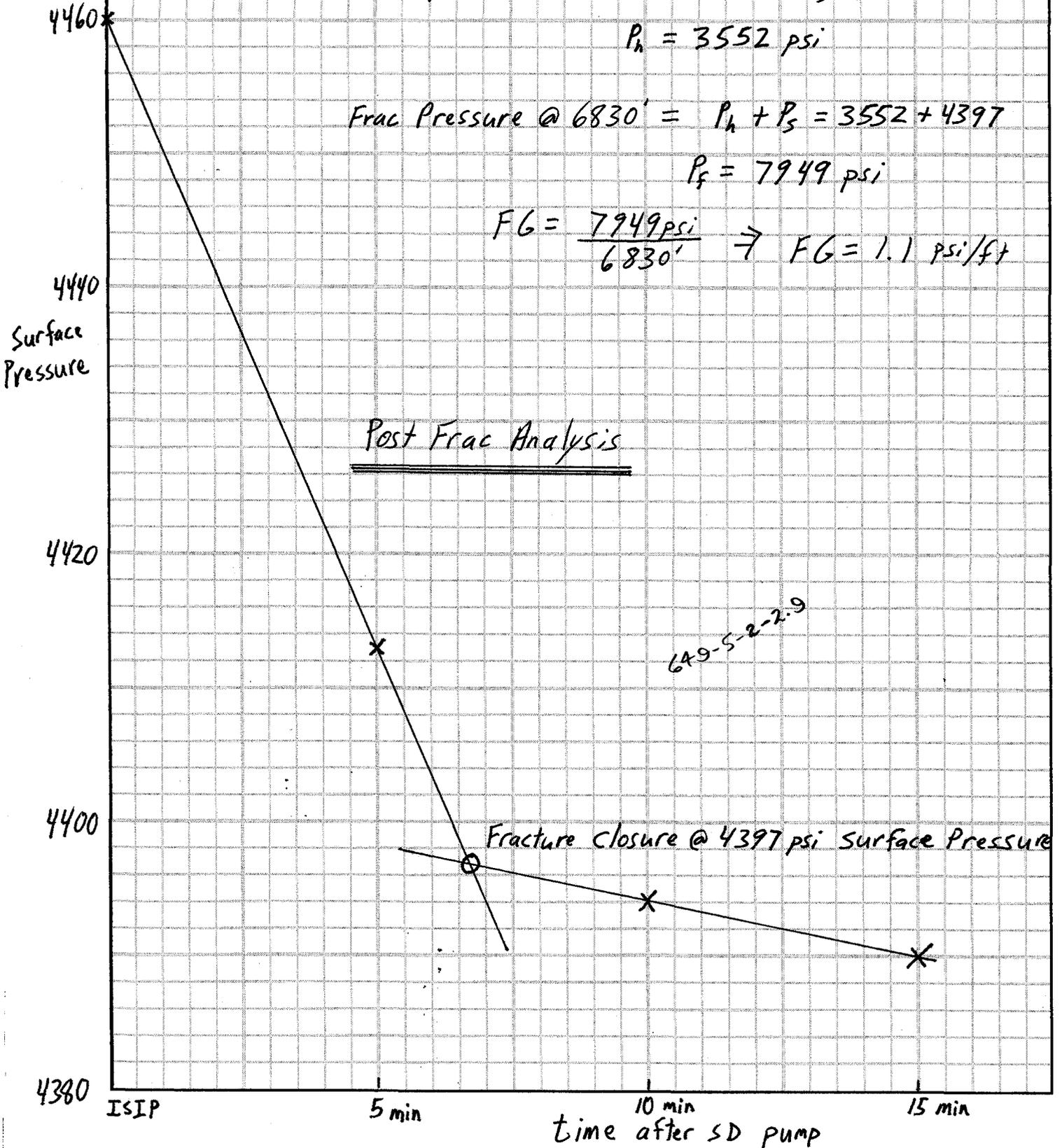
$\therefore$  Hydrostatic Pressure = .052(10ppg)(6830')

$P_h = 3552 \text{ psi}$

Frac Pressure @ 6830' =  $P_h + P_f = 3552 + 4397$

$P_f = 7949 \text{ psi}$

$FG = \frac{7949 \text{ psi}}{6830'} \rightarrow FG = 1.1 \text{ psi/ft}$



AVIARA ENERGY CORPORATION

SUBJECT Kane Springs Federal #16-1  
 (present injection interval)  
Fracture Gradient Analysis From Acid Job 1-14-98

PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 AFE NO. \_\_\_\_\_  
 BY \_\_\_\_\_ DATE \_\_\_\_\_

This test was conducted prior to acid entering tbg ∴ tbg was filled with lease SW @ ~9.8 ppg (1.18 SG)

$$BHP_{frac} = 1400\# + .052(9.8)(3670')$$

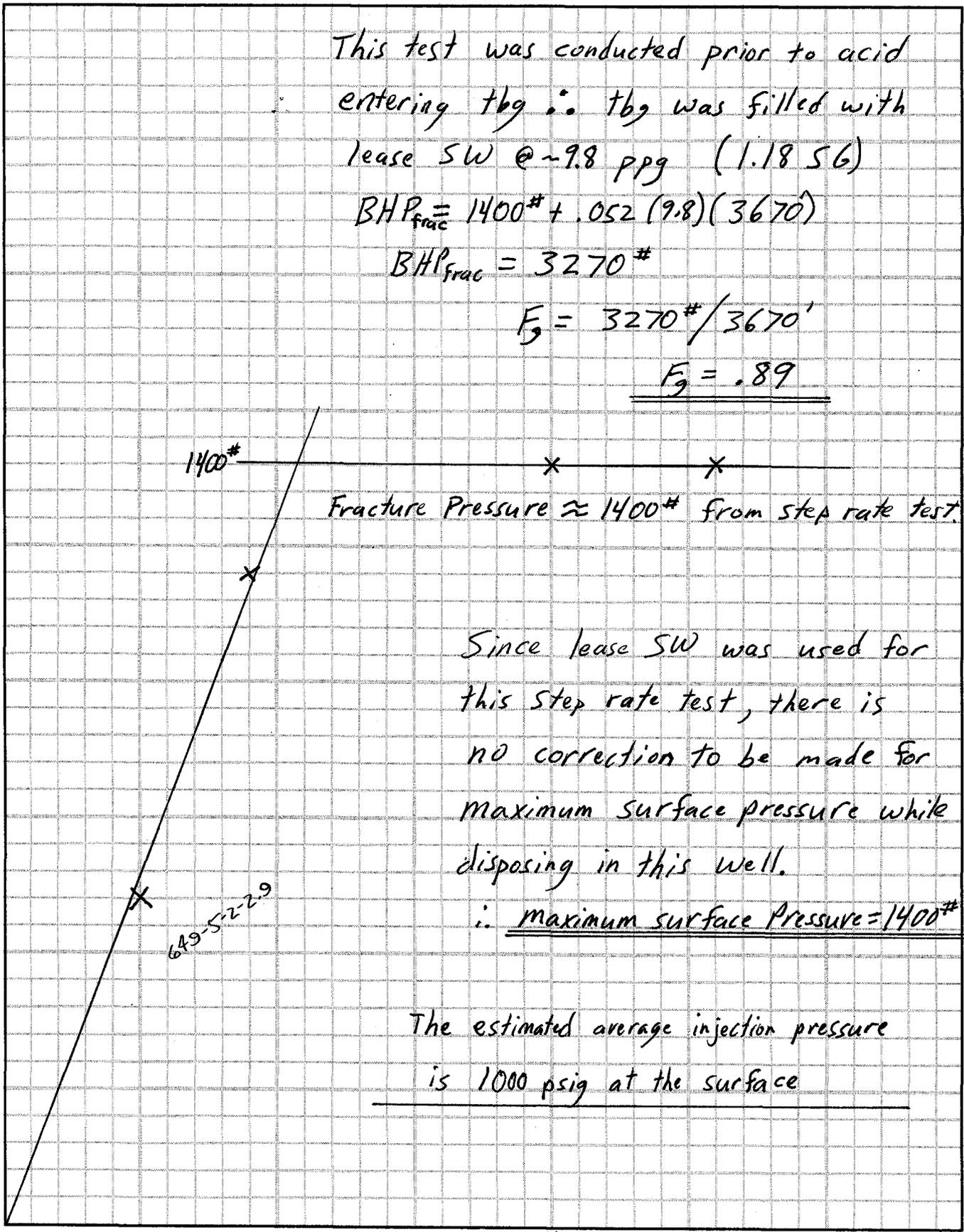
$$BHP_{frac} = 3270\#$$

$$F_g = 3270\# / 3670'$$

$$\underline{F_g = .89}$$

Surface Pressure  
psig

2000  
1750  
1500  
1000  
750  
500  
250



Fracture Pressure  $\approx$  1400# from step rate test

Since lease SW was used for this step rate test, there is no correction to be made for maximum surface pressure while disposing in this well.

$$\therefore \underline{\text{maximum surface Pressure} = 1400\#}$$

The estimated average injection pressure is 1000 psig at the surface

Pump Rate BPM

# Saturation Index Calculations

Champion Technologies, Inc.  
(Based on the Tomson-Oddo Model)

Native Water

## Site Information

Company	Aviara Energy Corp.
Field	KSFU
Point	16-1
Date	2/16/98

## Water Analysis (mg/L)

Calcium	17,163
Magnesium	3,208
Barium	2
Strontium	182
Sodium*	56540
Bicarbonate Alkalinity	73
Sulfate	1,365
Chloride	126,000

## Appended Data

CO2	180 mg/L
H2S	0 mg/L
Iron	16 mg/L

\* - Calculated Value

## Physical Properties

Ionic Strength*	4.16
pH*	6.12
Temperature	85°F
Pressure	100 psia

\* - Calculated Value

## Calcite Calculation Information

Calculation Method	Value
CO2 in Brine	180 mg/L
<hr/>	
Bicarbonate Alkalinity Correction(s)	Value
None Used	---

## SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-0.67	N/A
Gypsum (Calcium Sulfate)	0.22	276.4
Hemihydrate (Calcium Sulfate)	0.19	205.1
Anhydrite (Calcium Sulfate)	0.34	297.3
Barite (Barium Sulfate)	0.94	1.0
Celestite (Strontium Sulfate)	0.31	62.4

649-5-2-2.7

CA

# Saturation Index Calculations

Champion Technologies, Inc.  
(Based on the Tomson-Oddo Model)

Produced Water to be Inj.

## Site Information

Company	Aviara Energy Corp.
Field	KSFU
Point	19-1A
Date	2/16/98

## Water Analysis (mg/L)

Calcium	36,892
Magnesium	4,374
Barium	14
Strontium	951
Sodium*	43649
Bicarbonate Alkalinity	37
Sulfate	109
Chloride	146,000

\* - Calculated Value

## Appended Data

CO2	360 mg/L
H2S	0 mg/L
Iron	18 mg/L

## Physical Properties

Ionic Strength*	5.23
pH*	5.90
Temperature	85°F
Pressure	100 psia

\* - Calculated Value

## Calcite Calculation Information

Calculation Method	Value
CO2 in Brine	360 mg/L
<hr/>	
Bicarbonate Alkalinity Correction(s)	Value
None Used	---

## SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	-0.61	N/A
Gypsum (Calcium Sulfate)	-0.54	N/A
Hemihydrate (Calcium Sulfate)	-0.54	N/A
Anhydrite (Calcium Sulfate)	-0.30	N/A
Barite (Barium Sulfate)	0.88	7.1
Celestite (Strontium Sulfate)	0.07	7.2

649-5-2-2.7

BAA

# Saturation Index Calculations

Champion Technologies, Inc.  
(Based on the Tomson-Oddo Model)

*Compatibility Test*

Brine 1: KSU 16-1

Brine 2: KSU 19-1A

Component (mg/L)	Brines		Ratio			
	Brine 1	Brine 2	25 75	50 50	75 25	
Calcium	17163	36892	31960	27028	22095	#DIV/0!
Magnesium	3208	4374	4083	3791	3500	#DIV/0!
Barium	2	14	11	8	5	#DIV/0!
Strontium	182	951	759	567	374	#DIV/0!
Bicarbonate	73	37	46	55	64	#DIV/0!
Sulfate	1365	109	423	737	1051	#DIV/0!
Chloride	126000	146000	141000	136000	131000	#DIV/0!
CO <sub>2</sub> in Brine	180	360	315	270	225	#DIV/0!
Ionic Strength	4.16	5.23	4.97	4.70	4.43	#VALUE!
Temperature (°F)	100	100	100	100	100	#DIV/0!
Pressure (psia)	2000	2000	2000	2000	2000	#DIV/0!

## Saturation Index

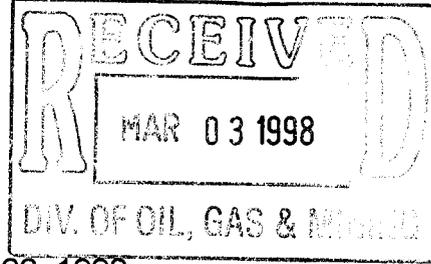
Calcite	-0.64	-0.58	-0.56	-0.57	-0.60	#VALUE!
Gypsum	0.03	-0.76	-0.23	-0.06	0.02	#VALUE!
Hemihydrate	0.00	-0.77	-0.24	-0.08	-0.01	#VALUE!
Anhydrite	0.28	-0.40	0.10	0.25	0.29	#VALUE!
Barite	0.70	0.60	1.04	1.10	1.02	#VALUE!
Celestite	0.16	-0.11	0.35	0.43	0.38	#VALUE!

## PTB

Calcite	N/A	N/A	N/A	N/A	N/A	#VALUE!
Gypsum	39.5	N/A	N/A	N/A	21.5	#VALUE!
Hemihydrate	N/A	N/A	N/A	N/A	N/A	#VALUE!
Anhydrite	234.2	N/A	26.5	105.2	175.9	#VALUE!
Barite	0.9	6.0	5.9	4.4	2.7	#VALUE!
Celestite	35.3	N/A	83.8	142.0	121.9	#VALUE!

649-5-2-2.7

**Aviara Energy  
Corporation**



February 26, 1998

Mr. Dan Jarvis, UIC Geologist  
State of Utah  
Division of Oil, Gas and Mining  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: Application of Aviara Energy Corporation  
For Injection Well For The Kane Springs  
Federal Unit No. 16-1 Well, Grand County, Utah

Dear Mr. Jarvis:

Attached is a SWD permit for Aviara Energy Corporation's Federal Unit 16-1 in Grand County.

Logs are also included for this well, since Coastal did not file any when the well was drilled in 1993.

If you have any questions or require additional information, please feel free to call me at (713) 871-3413. Your help in this matter is greatly appreciated.

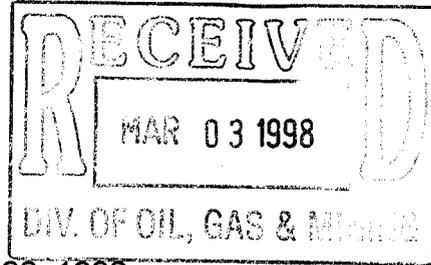
Sincerely,

*CALL Mark Swisher  
If you need info  
on Aviara Well  
713-871-3413*

A handwritten signature in cursive script that reads "Swisher".

Mr., P.E.  
Civil Engineer

**Aviara Energy  
Corporation**



February 26, 1998

Mr. Dan Jarvis, UIC Geologist  
State of Utah  
Division of Oil, Gas and Mining  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

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Sincerely,

A handwritten signature in cursive script that reads "Mark Swisher".

Mark Swisher, P.E.  
Staff Petroleum Engineer

/ms  
Attachments

February 26, 1998

Page 2

Intrepid Oil & Gas, L.L.C.  
The Trinity Building  
1801 Broadway, Suite 800  
Denver, Colorado 80202  
Attn: Mr. Robert P. Jornayvaz, III

Kate Kitchell, District Manager  
Bureau of Land Management  
Moab District Office  
82 East Dogwood  
Moab, Utah 84532

MCNIC Oil & Gas Company  
370 17<sup>th</sup> Street, Suite 5650  
Denver, Colorado 80202  
Attn: Mr. James Dobson

Doug Koza  
Deputy State Director of Minerals  
Bureau of Land Management  
324 South State St.  
P. O. Box 45155  
Salt Lake City, Utah 84145-0155

Coastal Oil and Gas Corporation  
9 Greenway Plaza  
Houston, Texas 77046  
Attn: Mr. Bart Valls

CNG Producing Company  
1450 Poydras Street  
New Orleans, Louisiana 70112-6000  
Attn: Land Department

Gasconade Oil Co.  
633 17<sup>th</sup> Street  
Denver, Colorado 80202

Elliott A. Riggs  
633 17<sup>th</sup> Street  
Denver, Colorado 80202

Dan Roger Dubitzky  
Mary Gail Dubitzky  
Jane Ann Dubitzky Stendel  
6663 South Prescott Way  
Littleton, Colorado 80120

State of Utah  
School & Institutional Trust  
Lands Administration  
675 East 500 South #500  
Salt Lake City, Utah 84102  
Attn: Kevin Carter (surface)  
James Cooper (minerals)

# Proof of Publication

BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF AVIARA ENERGY CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE KANE SPRINGS #16-1 WELL LOCATED IN SECTION 16, TOWNSHIP 25 SOUTH, RANGE 18 EAST, S.L.M., GRAND COUNTY, UTAH, AS A CLASS II INJECTION WELL

NOTICE OF AGENCY ACTION CAUSE NO. UIC-208 THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Aviara Energy Corporation for administrative approval of the Kane Springs #16-1 well, located in Section 16, Township 25 South, Range 18 East, Grand County, Utah, for conversion to a Class II injection well. The proceeding will be conducted in accordance with Utah Admin. R.649-10, Administrative Procedures.

The interval from 3,670 feet to 3,720 feet (Honaker Trail Formation) will be selectively perforated for water injection. The maximum requested injection pressure is 1400 psig with a maximum rate of 200 BWPD.

Any person desiring to

STATE OF UTAH, )  
County of Grand, ) ss.

Samuel J. Taylor or Adrien F. Taylor, being first duly sworn according to law, deposes and says: That he/she is the co-publisher of The Times-Independent, a weekly newspaper of general circulation, published every Thursday at Moab, Grand County, State of Utah; that the notice

Notice of Action

hereto attached, and which is made a part of this Affidavit of Publication, was published in said newspaper for a period of 1 consecutive issues, the first publication date having been made April 16, 1998

;and the last on

;and the said notice was published in each and every copy of said newspaper during the period and time of publication, and that it was published in the newspaper proper and not in a supplement thereof.

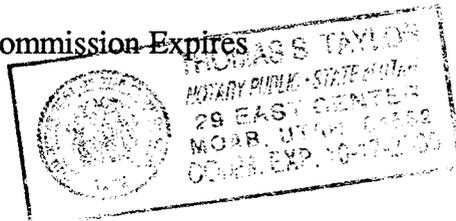
*Samuel J. Taylor*  
Co-Publisher

Subscribed and sworn before me this

*[Signature]*

Notary Public  
Residing at Moab, Utah

My Commission Expires



Conformance with Utah  
Admin. R. 649-10, Admin-  
istrative Procedures.

The interval from  
3,670 feet to 3,720 feet  
(Honaker Trail Forma-  
tion) will be selectively  
perforated for water in-  
jection. The maximum  
requested injection pres-  
sure is 1400 psig with a  
maximum rate of 200  
BWP/D.

Any person desiring to  
object to the application  
or otherwise intervene in  
the proceeding, must file  
a written protest or notice  
of intervention with the  
Division within fifteen  
days following publica-  
tion of this notice. If such  
a protest or notice of in-  
tervention is received, a  
hearing will be scheduled  
before the Board of Oil,  
Gas and Mining. Protes-  
tants and/or intervenors  
should be prepared to  
demonstrate at the hear-  
ing how this matter af-  
fects their interests.

Dated this 9th day of  
April 1998

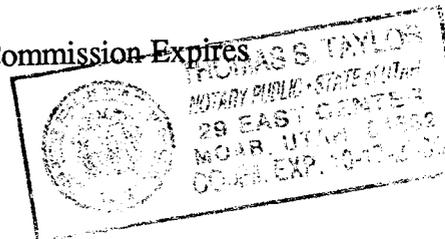
STATE OF UTAH  
DIVISION OF OIL, GAS  
& MINING  
/s/Gil Hunt

for John R. Baza  
Associate Director,  
Oil & Gas

Published in The  
Times-Independent,  
Moab, Utah, April 16,  
1998.

Notary Public  
Residing at Moab, Utah

My Commission Expires



DIVISION OF OIL, GAS AND MINING  
UNDERGROUND INJECTION CONTROL PROGRAM

**PERMIT  
STATEMENT OF BASIS**

**Applicant:** Aviara Energy Corporation      **Well:** Kane Spring Federal Unit # 16-1

**Location:** T25S, R18E, S16, Grand Co., UT      **API:** 4301930341

**Ownership Issues:**

The well is located on State of Utah lands administered by the School and Institutional Trust Lands Administration. Other landowners within a half mile buffer distance from the proposed injection well are the United States of America. Aviara Energy Corporation controls the leases on these three sections. An sworn Affidavit of Mailing of the application and associated documentation to the particular owners/surface owners has been placed in the well file.

**Well Integrity:**

20" conductor pipe set at 67'. Set 823' of J55 ST&C (54.5#) 13-3/8" casing in a 17-1/2" hole cemented with 450 sacks of HLC Type V cement plus additives. 12-1/4" hole drilled to 4,995' for 10-3/4", 60.7#, S-95 Hydril casing set at 4,995' and cemented w/ 690 sacks of Silica Light plus 1145 sacks PPAG Type 5 plus additives. 9-1/2" hole drilled to 7,603' for 7-5/8", 39#, S95 Hydril 521 liner set at 7,600' and cemented with 175 sacks 14# POZ scavenger, 470 sacks Premium AG-250 and additives. Cement retainer set at 7563' and squeezed with 35 sacks of cement. An Acoustic Cement Bond Log was run between 1650' and 7025'. The top of cement was logged at 1,860'. This should be adequate to prevent any upward migration of fluid between the 7-5/8" casing and the borehole wall. The 7-5/8" casing was perforated from 6,830' to 6,878' in the Clastic 19 zone. Tubing (2-7/8", 6.5# N-80 EUE) was run into the well and a packer was set at 6,710'. Subsequently, the tubing was cut at 6,579'. A casing-tubing annular pressure test will be required prior to commencement of injection.

**Ground Water Protection:**

It is unlikely that a significant groundwater resource will be encountered near the surface. Deadman Spring is about a mile north northeast. It flows from the base of the permeable Jurassic Navajo Sandstone which is eroded away northwest,

southwest and southeast of the location and also for about half a mile to the northeast. The subjacent Jurassic Kayenta Formation is relatively impermeable. The location is surrounded by eolian sand which frequently covers the Kayenta Formation. A minor water resource may be encountered at the base of the subjacent and more permeable Jurassic Wingate Sandstone. The Wingate Sandstone is the primary cliff forming formation in the canyons of the area and seeps, which can be locally important to wildlife and livestock, are occasionally found at its base (atop the Triassic Chinle Formation). Water production may next be encountered in the Permian Rico Formation. Another water source near the top of the first lime (probably Rico Formation) in the Kane Spring Federal 25-19-34-1 was reported to be salty. Lastly, salty (~20,000 ppm chlorides) water was encountered in what is probably the Honaker Trail Formation in the Kane Spring Federal 19-1A. The Green River is about 3 miles to the southwest in a canyon about 800' below the location. Surface and intermediate casing will adequately protect this resource. Clastic 23 (the "Cane Creek" zone) of the Paradox Formation provides the field produced (and injected) water. The water is obtained from between 7,400' and 8,200' TVD and, in a nearby production well (19-1A), has shown a total dissolved solids (TDS) level of about 230,000 mg/l.

The zone being permitted for injection is not considered an Underground Source of Drinking Water (USDW; a water source containing less than 10,000 mg/l, total dissolved solids). The water in the zone tested at nearly 200,000 mg/l, TDS.

It is our conclusion after reviewing applicable information including the application submitted by Avicara Energy Corporation, that injection into the proposed zone at this location would result in a minor increase in the concentration of the already highly saline water present in the aquifer and a pressure increase near the well which would dissipate after injection ceases. No long term negative impacts are anticipated as a result of injection of produced water into the subject well.

#### **Oil/Gas & Other Mineral Resources Protection:**

The "Cane Creek" productive zone is protected by casing and cement. No other known potentially producible zones were encountered by the well. The injection zone is isolated some 4,000' above the productive interval.

A review of the well records of the Division of Oil, Gas and Mining for the half mile area of review indicated that there were no wells within that radius.

The Potash solution / evaporation mining operation along the Colorado River is considered to be too distant (over 16 miles to the southeast) to be impacted by operations at the injection well. Fracture communication at the injection and production zones cannot be supported from experience in the area.

**Bonding:**

Aviara has an \$80,000 surety bond in place which provides coverage for this well.

**Actions Taken and Further Approvals Needed:**

Notice of this application was published in the Salt Lake Tribune, Deseret News and Moab Times Independent. In addition, copies of the notice was provided to the EPA and Aviara. The notice stated the proposed interval for injection to be from 3,670' to 3,720' in the Honaker Trail Formation. Any future injection into a formation other than the Honaker Trail Formation will require administrative approval after appropriate sampling and testing.

A properly designed and constructed injection well, combined with periodic mechanical integrity tests, poses no threat to fresh or useable groundwater supplies. The Division staff recommends administrative approval of this application.

Note: Applicable technical publications concerning water resources in the general vicinity of this project have been reviewed and taken into consideration during the permit review process.

Reviewer(s): Christopher Kierst

Date: 5/12/98

COLUMBIA GAS DEVELOPMENT CORPORATION  
APPROVAL FOR ANNULAR INJECTION OF DRILLING FLUIDS

KANE SPRINGS FEDERAL #19-1A ST  
SEC. 19, T26S, R20E, GRAND CO., UTAH  
43-019-31324

*Hermosa @ 2582*

The proposal is to allow drilling fluid (primarily salt water) to free fall down the annulus between the 20" and 13 3/8" casing strings. The hole was drilled with air and mist to a depth of 4521'. This indicates that no prolific water aquifers or fracture systems were encountered. Some salt water was encountered at 2700' (22,000 ppm chlorides). The fact that several lost circulation zones were encountered between 2700' and 4521', and that excess volumes of cement were pumped while trying to cement the 13 3/8" casing which resulted in only 279' of cement above the casing shoe (to 4242'), indicates that any fluid falling down the annulus would most likely exit the well bore between 2700' and 4242'.

Study indicates that ground-water flow in the area is controlled primarily by extensional faulting. These faults appear to be limited to the crest area of the Cane Creek anticline near the potash mine. Wells and mine shafts in areas void of extensional faulting encountered little ground water. While those located near faults (Texasgulf Cane Creek No. 7 Well) encountered prolific water zones. These zones are charged with hydrogen sulfide brines.

Due to the lack of faulting near the #19-1A well it is likely that injection of a small volume of fluid under little or no surface pressure would not be transmitted very far from the well bore. It is also expected that due to the inability of the formation near 4242' depth to hold a hydrostatic head greater than 230 psi, that fluid entry would be at or near this depth. Since the water which now exists in this interval is saline, the addition of a small volume of drilling fluid (primarily salt water) at low pressure would have no adverse affects on the ground water system or other resources in the area.

**CONDITIONS OF APPROVAL:**

1. Surface injection pressure shall not exceed 100 psig during injection operations.
2. A temperature or tracer log shall be run to verify that the interval at which the fluid leaves the well bore is not above 2700'. If a temperature log is used the injection fluid shall be cooled or heated to the point which allows adequate temperature differential between it and the formation to show departure. During the disposal operations if logging shows the fluid is not going below 2700' for any reason, injection operations shall cease immediately and an alternative disposal method used.
3. This is a one time approval for disposal of not more than 2000 barrels of fluid.

10-1	31331	S.10	25 S	18 E	1940' Cutler ? 1780 White Rim ?
27-1	31310	S.27	25 S	19 E	1430 Cutler
28-1	31325	S.28	25 S	19 E	1340 Cutler 2555 Honaker TR
LC-1	15925	S.9	26 S	20 E	El 2235 Hermosa El 960 Coconino
19-1A	31324	S.19	26 S	20 E	1349 Cutler 2582 Hermosa
20-1	31332	S.20	26 S	19 E	
F-1	10715	S.10	25 S	18 E	Cutler 1596' White Rim 1666
F*-20	30043	S.20	25 S	18 E	Rico 2308 Hermosa 2848
F*-21	30033	S.21	25 S	18 E	
S-B*-1	30170	S.21	25 S	18 E	Cutler 1620 White Rim 1410 Hermosa 2846
PEB*-1	10931	S.29	25 S	18 E	Cutler 1407 White Rim 1445
FB-1	10368	S.30	25 S	18 E	Cutler E1370 White Rim E1466 Rico E2188 Hermosa E2723
SQFI-35	30045	S.35	25 S	18 E	
BFU*-5	11333	S.27	25 S	19 E	Cutler 1425 Rico 2200 Hermosa 2660
MPF*-4	30182	S.4	26 S	18 E	Cutler 1395 White Rim 1485 Rico 2180 Hermosa 2690

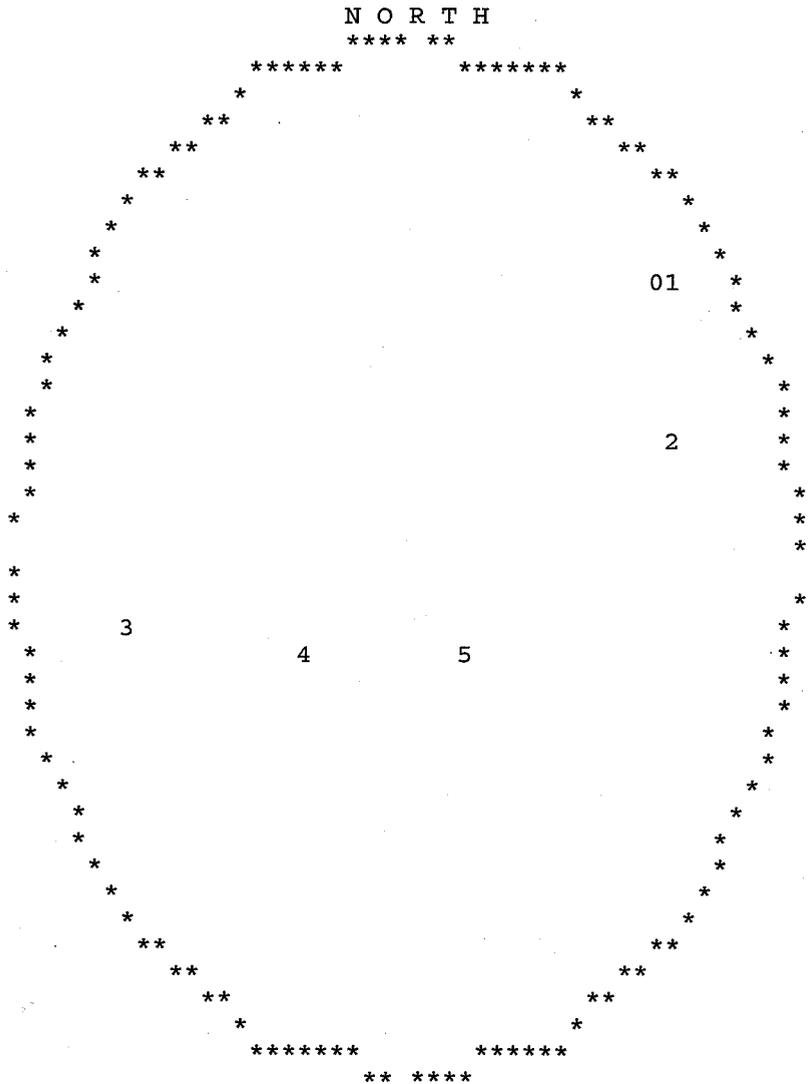


ONE MOMENT. HARDCOPY BEING PRINTED ON DEVICE 0

UTAH DIVISION OF WATER RIGHTS  
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, MAR  
PLOT SHOWS LOCATION OF 6 POINTS OF DI

PLOT OF AN AREA WITH A RADIUS OF 10000 FEET  
N 960 FEET, E 1960 FEET OF THE SW CORNER,  
SECTION 16 TOWNSHIP 25S RANGE 18E SL BASE

PLOT SCALE IS APPROXIMATELY 1 INCH = 4000 F



UTAH DIVISION OF WATER RIGHTS  
NWPLAT POINT OF DIVERSION LOCATION PR

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR AC-FT	SOURCE DESCRIPTION DIAMETER	or DEPTH	WELL INFO YEAR LOG	POI NORTH
----------	-------------	--------------	--------------	-----------------------------	----------	--------------------	-----------

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0	<u>92 203</u>	.0010	.00	Deadman Springs 1 and 2	N	1200
		WATER USE(S):				
		USA Bureau of Land Management		P.O. Box 45155		
1	<u>92 203</u>	.0010	.00	Deadman Springs 1 and 2	N	1100
		WATER USE(S):				
		USA Bureau of Land Management		P.O. Box 45155		
2	<u>92 403</u>	.0000	.00			
		WATER USE(S): STOCKWATERING OTHER				
		USA Bureau of Land Management (Moab Dist		P.O. Box 970		
3	<u>43 3477</u>	.0150	.00	7 85	S	110
		WATER USE(S): DOMESTIC STOCKWATERING				
		Marchant, Grant G.				
4	<u>92 404</u>	.0000	.00			
		WATER USE(S): STOCKWATERING OTHER				
		USA Bureau of Land Management (Moab Dist		P.O. Box 970		
5	<u>92 405</u>	.0000	.00			
		WATER USE(S): STOCKWATERING OTHER				
		USA Bureau of Land Management (Moab Dist		P.O. Box 970		

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1

UTAH DIVISION OF WATER RIGHTS  
 NWPLAT POINT OF DIVERSION LOCATION PROGRAM

MAP CHAR	WATER RIGHT	QUANTITY CFS	AND/OR AC-FT	SOURCE DESCRIPTION or WELL INFO	POINT OF DIVERSION DESCRIPTION
				DIAMETER DEPTH YEAR LOG	NORTH EAST CNR SEC TWN RNG B
0	<u>92 203</u>	.0010	.00	Deadman Springs 1 and 2	N 1200 W 2150 SE 10 25S 18E
		WATER USE(S):			PRIORITY DATE: 00/00/
		USA Bureau of Land Management		P.O. Box 45155	Salt Lake City
1	<u>92 203</u>	.0010	.00	Deadman Springs 1 and 2	N 1100 W 1820 SE 10 25S 18E
		WATER USE(S):			PRIORITY DATE: 00/00/
		USA Bureau of Land Management		P.O. Box 45155	Salt Lake City
2	<u>92 403</u>	.0000	.00		
		WATER USE(S): STOCKWATERING OTHER			PRIORITY DATE: 00/00/
		USA Bureau of Land Management (Moab Dist P.O. Box 970)			Moab
3	<u>43 3477</u>	.0150	.00	7 85	S 110 E 150 NW 20 21S 1E
		WATER USE(S): DOMESTIC STOCKWATERING			PRIORITY DATE: 06/20/
		Marchant, Grant G.			Roosevelt
4	<u>92 404</u>	.0000	.00		
		WATER USE(S): STOCKWATERING OTHER			PRIORITY DATE: 00/00/
		USA Bureau of Land Management (Moab Dist P.O. Box 970)			Moab
5	<u>92 405</u>	.0000	.00		
		WATER USE(S): STOCKWATERING OTHER			PRIORITY DATE: 00/00/
		USA Bureau of Land Management (Moab Dist P.O. Box 970)			Moab



PROOF OF PUBLICATION

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	DATE
DIV OF OIL GAS & MAINING 1594 WEST NORTH TEMPLE, SUITE 1210, BX 145801 SALT LAKE CITY, UT 84114	D5385340L-07	04/14/98

ACCOUNT NAME	
DIV OF OIL GAS & MAINING	
TELEPHONE	INVOICE NUMBER
801-538-5340	TL4A8201081
SCHEDULE	
START 04/14/98 END 04/14/98	
CUST. REF. NO.	
UIC-208	

NOTICE OF AGENCY ACTION  
CAUSE NO. UIC-208  
BEFORE THE DIVISION OF  
OIL GAS AND MINING  
DEPARTMENT OF NATURAL  
RESOURCES, STATE OF UTAH

IN THE MATTER OF THE APPLI-  
CATION OF AVIARA ENERGY COR-  
PORATION FOR ADMINISTRATIVE  
APPROVAL OF THE KANE  
SPRINGS #16-1 WELL LOCATED  
IN SECTION 16, TOWNSHIP 25  
SOUTH, RANGE 18 EAST, S.L.M.,  
GRAND COUNTY, UTAH, AS  
CLASS II INJECTION WELL

THE STATE OF UTAH TO ALL PER-  
SONS INTERESTED IN THE ABOVE  
ENTITLED MATTER:

Notice is hereby given that  
the Division of Oil Gas and Min-  
ing (the "Division") is commencing  
an informal adjudicative  
proceeding to consider the ap-  
plication of Avlara Energy Cor-  
poration for administrative ap-  
proval of the Kane Springs #16-  
1 well, located in Section 16,  
Township 25 South, Range 18  
East, Grand Duchesne County,  
Utah; for conversion to a Class II  
injection well. The proceeding  
will be conducted in accor-  
dance with Utah Admin. R649-  
10, Administrative Procedures.

The interval from 3,670 feet to  
3,720 feet (Honaker Trail Forma-  
tion) will be selectively perforat-  
ed for water injection. The max-  
imum requested injection  
pressure is 1400 psig with a  
maximum rate of 200 BWPD.

Any person desiring to object  
to the application or otherwise  
intervene in the proceeding,  
must file a written protest or no-  
tice of intervention with the Di-  
vision within fifteen days follow-  
ing publication of this notice. If  
such a protest or notice of inter-  
vention is received, a hearing  
will be scheduled before the  
Board of Oil, Gas and Mining.  
Protestants and/or intervenors  
should be prepared to demon-  
strate at the hearing how this  
matter affects their interests.

DATED this 9th day of April,  
1998.

STATE OF UTAH  
DIV. OF OIL GAS AND MINING  
/s/ Gill Hunt  
for John R. Bazz  
Associate Director, Oil & Gas  
4A820100

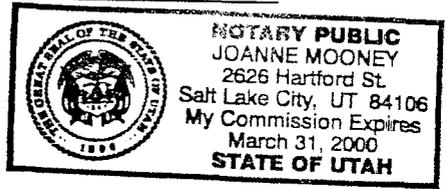
CAPTION	
NOTICE OF AGENCY ACTION CAUSE N	
SIZE	
71 LINES	1.00 COLUMN
TIMES	RATE
1	1.64
MISC. CHARGES	AD CHARGES
.00	116.44
TOTAL COST	
116.44	

AFFIDAVIT OF PUBLICATION

NEWSPAPER AGENCY CORPORATION LEGAL BOOKKEEPER, I CERTIFY THAT THE ATTACHED  
STATEMENT OF NOTICE OF AGENCY ACTION CAUSE N  
OIL GAS & MAINING WAS PUBLISHED BY THE NEWSPAPER AGENCY  
FOR THE SALT LAKE TRIBUNE AND DESERET NEWS, DAILY NEWSPAPERS  
IN THE ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN UTAH, AND PUBLISHED  
IN SALT LAKE CITY, SALT LAKE COUNTY IN THE STATE OF UTAH.

ON START 04/14/98 END 04/14/98

*Joanne Mooney*  
\_\_\_\_\_  
04/14/98



THIS IS NOT A STATEMENT BUT A "PROOF OF PUBLICATION"  
PLEASE PAY FROM BILLING STATEMENT.

2971 REC 10/31 NIHANNA FIELD

BEFORE THE DIVISION OF OIL, GAS AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH

---ooOoo---

IN THE MATTER OF THE	:	NOTICE OF AGENCY
APPLICATION OF AVIARA ENERGY	:	ACTION
CORPORATION FOR	:	
ADMINISTRATIVE APPROVAL OF	:	CAUSE NO. UIC-208
THE KANE SPRINGS #16-1 WELL	:	
LOCATED IN SECTION 16,	:	
TOWNSHIP 25 SOUTH, RANGE 18	:	
EAST, S.L.M., GRAND COUNTY,	:	
UTAH, AS A CLASS II INJECTION	:	
WELL	:	

---ooOoo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Aviaara Energy Corporation for administrative approval of the Kane Springs #16-1 well, located in Section 16, Township 25 South, Range 18 East, Grand County, Utah, for conversion to a Class II injection well. The proceeding will be conducted in accordance with Utah Admin. R.649-10, Administrative Procedures.

The interval from 3,670 feet to 3,720 feet (Honaker Trail Formation) will be selectively perforated for water injection. The maximum requested injection pressure is 1400 psig with a maximum rate of 200 BWPD.

Any person desiring to object to the application or otherwise intervene in the proceeding, must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. If such a protest or notice of intervention is received, a hearing will be scheduled before the Board of Oil, Gas and Mining. Protestants and/or intervenors should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 9th day of April 1998

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING

*for*   
John R. Baza  
Associate Director, Oil & Gas



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

April 9, 1998

Newspaper Agency Corporation  
Legal Advertising  
PO Box 45838  
Salt Lake City, Utah 84145

Re: Notice of Agency Action - Cause No. UIC-208

Gentlemen:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please send proof of publication and billing to the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, P.O. Box 145801, Salt Lake City, Utah 84114-5801.

Sincerely,

A handwritten signature in cursive script that reads "Lorraine Platt".

Lorraine Platt  
Secretary

Enclosure



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

April 9, 1998

The Times-Independent  
PO Box 129  
35 E Center St  
Moab, Utah 84532-0129

Re: Notice of Agency Action - Cause No. UIC-208

Gentlemen:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please send proof of publication and billing to the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, P.O. Box 145801, Salt Lake City, Utah 84114-5801.

Sincerely,

A handwritten signature in cursive script that reads "Lorraine Platt".

Lorraine Platt  
Secretary

Enclosure

**Aviara Energy Corporation  
Kane Spring Federal 16-1 Well  
Cause No. UIC-208**

Publication Notices were sent to the following:

Aviara Energy Corporation  
P.O. Box 1350  
Houston, Texas 77251-1350

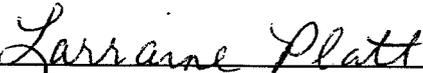
Newspaper Agency Corporation  
Legal Advertising  
P.O. Box 45838  
Salt Lake City, Utah 84145

The Times-Independent  
PO Box 129  
35 E Center St  
Moab, Utah 84532-0129

Moab Field Office  
Bureau of Land Management  
82 East Dogwood, Suite M  
Moab, Utah 84532

U.S. Environmental Protection Agency  
Region VIII  
Attn. Dan Jackson  
999 18th Street  
Denver, Colorado 80202-2466

Ed Bonner, SITLA

  
\_\_\_\_\_  
Lorraine Platt  
Secretary  
April 9, 1998



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

UNDERGROUND INJECTION CONTROL PERMIT

Cause No. UIC-208

Operator: Aviara Energy Corporation  
Wells: Kane Springs Federal Unit #16-1  
Location: Section 16, Township 25 South, Range 18 East,  
County: Grand  
API No.: 43-019-31341  
Well Type: Disposal

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on May 12, 1998
2. Maximum Allowable Injection Pressure: 1,400 psig
3. Maximum Allowable Injection Rate: 200 BWPD
4. Injection Interval: 3,670 feet to 3,720 feet (Honaker Trail Formation)

Approved by:

  
John R. Baza  
Associate Director, Oil and Gas

5/12/98  
Date



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

May 12, 1998

Aviara Energy Corporation  
One Riverway, Suite 700  
P. O. Box 1350  
Houston, Texas 77251-1350

Re: Kane Springs Federal Unit #16-1 Well, Section 16, Township 25 South, Range 18  
East, Grand County, Utah

Gentlemen:

Pursuant to Utah Admin. Code R649-5-3-3, the Division of Oil, Gas and Mining (the "Division") issues its administrative approval for conversion of the referenced well to a Class II injection well. Accordingly, the following stipulations shall apply for full compliance with this approval:

1. Compliance with all applicable requirements for the operation, maintenance and reporting for Underground Injection Control ("UIC") Class II injection wells pursuant to Utah Admin. Code R649-1 et seq.
2. Conformance with all conditions and requirements of the complete application submitted by Aviara Energy Corporation.

If you have any questions regarding this approval or the necessary requirements, please contact Christopher Kierst at this office.

Sincerely,

John R. Baza  
Associate Director, Oil and Gas

cc: Dan Jackson, Environmental Protection Agency  
Eric Jones, Bureau of Land Management, Moab District Office  
Ed Bonner, School and Institutional Trust Lands Administration

BEFORE THE DIVISION OF OIL, GAS AND MINING  
OF THE STATE OF UTAH

RE: APPLICATION OF AVIARA ENERGY CORPORATION  
FOR INJECTION WELL FOR THE KANE SPRINGS  
FEDERAL UNIT NO. 16-1 WELL, GRAND COUNTY, UTAH

AFFIDAVIT OF MAILING

STATE OF TEXAS

COUNTY OF HARRIS

649-5-2-2.12

BEFORE ME, the undersigned authority in and for the jurisdiction aforesaid, personally came and appeared STEVEN T. BURKE, CPL, who, after being by me first duly sworn, deposes and says:

1. That he is employed as a Petroleum Land Consultant by Aviara Energy Corporation, One Riverway, P. O. Box 1350, Houston, Texas 77251-1350, and is responsible for handling the land matters associated with the captioned well.
2. That on February 26, 1998, Aviara Energy Corporation mailed its completed Application for Injection Well and the required associated documentation related to such Application to the Division of Oil, Gas and Mining of the State of Utah and concurrently mailed a copy of said Application and associated documentation to the parties listed on Exhibit "A" attached hereto who are either working interest, mineral, royalty/overriding royalty, or surface owners within a one-half mile radius of the proposed injection well. There are no Operators to notify other than Aviara Energy Corporation whose wells (which are not plugged and abandoned) are located within a one-half mile radius of the proposed injection well.
3. Said Application and associated documentation were mailed by the undersigned Affiant to the owners set forth on the attached Exhibit "A" by depositing copies of same in the United States Mail, via First Class Mail (postage prepaid), and addressed to said owners at the mailing address indicated on the attached Exhibit "A".

  
Steven T. Burke, CPL

SWORN TO AND SUBSCRIBED BEFORE ME, this 26<sup>th</sup> day of February 1998.

My Commission Expires:

  
Notary Public

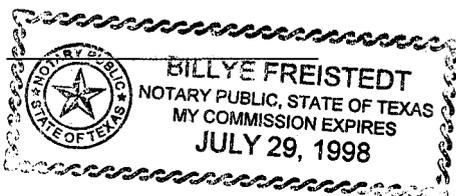


Exhibit "A"

Intrepid Oil & Gas, L.L.C.  
The Trinity Building  
1801 Broadway, Suite 800  
Denver, Colorado 80202  
Attn: Mr. Robert P. Jornayvaz, III

MCNIC Oil & Gas Company  
370 17<sup>th</sup> Street, Suite 5650  
Denver, Colorado 80202  
Attn: Mr. James Dobson

Coastal Oil and Gas Corporation  
9 Greenway Plaza  
Houston, Texas 77046  
Attn: Mr. Bart Valls

CNG Producing Company  
1450 Poydras Street  
New Orleans, Louisiana 70112-6000  
Attn: Land Department

Gasconade Oil Co.  
633 17<sup>th</sup> Street  
Denver, Colorado 80202

Elliott A. Riggs  
633 17<sup>th</sup> Street  
Denver, Colorado 80202

Dan Roger Dubitzky  
Mary Gail Dubitzky  
Jane Ann Dubitzky Stendel  
6663 South Prescott Way  
Littleton, Colorado 80120

State of Utah  
School & Institutional Trust Lands Administration  
675 East 500 South #500  
Salt Lake City, Utah 84102  
Attn: Kevin Carter (surface)  
James Cooper (minerals)

Kate Kitchell, District Manager  
Bureau of Land Management  
Moab District Office  
82 East Dogwood  
Moab, Utah 84532

Doug Koza  
Deputy State Director of Minerals  
Bureau of Land Management  
324 South State St.  
P. O. Box 45155  
Salt Lake City, Utah 84145-0155

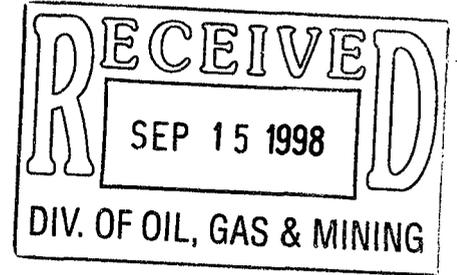
**Aviara Energy  
Corporation**

September 14, 1998

State of Utah  
Division of Oil, Gas, & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

Attention: Mr. John Baza

Reference: Kane Springs Unit 16-1  
Sec. 16 T25S R18E  
Grand County, Utah



Dear Mr. Baza:

Enclosed please find the original and three copies of the subsequent report, Form 9, "Sundry Notices and Reports on Wells" for above referenced well. Also included is the July 1998 "Monthly Injection Report", UIC Form 3.

These reports have not been filed in a timely manner due to a miscommunication between operations personnel and myself. I apologize for any inconvenience this may have caused and will endeavor to keep such mistakes from happening in the future.

Please contact me at 713-871-3444 should you have any questions or require additional information. Thank you for your assistance.

Very truly yours,

AVIARA ENERGY CORPORATION

A handwritten signature in cursive script that reads "Victoria Guidry".

Victoria Guidry  
Production/Regulatory Coordinator

/vlg

Enclosures

U:user\...\reg\033

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number  
**ML-44333**

6. Indian, Allottee or Tribe Name:  
**NA**

7. Unit Agreement Name:  
**Kane Springs Federal Unit**

8. Well Name and Number:  
**Kane Springs Unit 16-1**

9. API Well Number:  
**43 019 31341**

10. Field and Pool, or Wildcat  
**Wildcat**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such purposes

1. Type of Well: OIL  GAS  OTHER: \_\_\_\_\_

2. Name of Operator  
**Aviara Energy Corporation**

3. Address and Telephone Number.  
**P.O. Box 1350, Houston TX 77251-1350 713-871-3444**

4. Location of Well  
Footages: **960' FSL & 1960' FWL**  
County: **Grand**  
QQ,Sec., T., R., M.: **SE SW Sec. 16 T25S R18E**  
State: **Utah**

11. **CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
<input type="checkbox"/> Abandon	<input type="checkbox"/> New Construction	<input type="checkbox"/> Abandon*	<input type="checkbox"/> New Construction
<input type="checkbox"/> Repair Casing	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Repair Casing	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Perforate
<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Perforate	<input checked="" type="checkbox"/> Convert to Injection	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Fracture Treat or Acidize	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat or Acidize	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____	
<input type="checkbox"/> Other _____			

Date of work completion 1/16/98

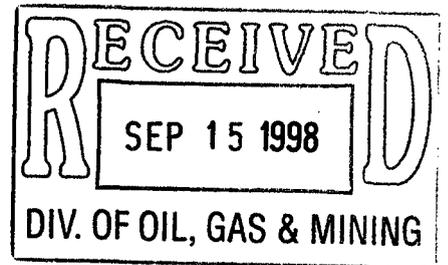
Report results of **Multiple Completions** and **Recompletions** to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

\* Must be accompanied by a cement verification report.

Approximate date work will start \_\_\_\_\_

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

See attachments



13. Name & Signature Victoria Guidry Title Victoria Guidry Prod/Regulatory Coord. Date 9/9/98

(This space for State use only)

AVIARA ENERGY CORPORATION  
KANE SPRINGS FEDERAL UNIT #16-1  
960' FSL 1960' FWL

GRAND COUNTY, UTAH  
SE SW SEC. 16, T25S-R18E

**RECOMPLETE TO SW DISPOSAL WELL**

1/3/98

MOVE IN RIG UP. RD TREE, RU BOP. ATTEMPT TO POOL SEAL ASSY FROM PKR. COULD NOT FREE. SIFN.

1/4/98

RIH W/ CHEM CUTTER. CUT PIPE @ 6579'. TOH W/ PIPE. RIH & SET 7-5/8" BP @ 6575'. TEST CSG & BP @2000#. HELD 20 MIN, OK. RIH & PERF 3710' - 20'. PUMP IN TO PERF'S @ 1-1/2 BPM - 1900#. SDFN.

1/5/98

ADDED PERFORATIONS 3670' - 3710'. TIH W/ TBG OPEN ENDED TO 3590'. SWAB TBG & CSG DN TO 3300'. SIFN.

1/6/98

TAG FLUID @ 2500'. LOWERED TBG TO 4100'. SWAB WELL DN TO 3900'. WELL FEEDS IN FROM 3900' TO 3400' IN 30 MIN. PU TBG TO 3717'. RIH W/ SWAB, TBG DRY. SIFN.

1/7/98

TIH W/ SWAB, TBG STILL DRY. LOWERED TBG TO 3800'. RIH. TAG FL @ 3700'. LD 3000' OF TBG. TIH W/ 3000' TBG FR DERRICK. RDMO. SI FOR FEED IN.

1/8-10/98

NO WORK DONE.

1/11/98

PULL UP HOLE TO 3709'. RIH W/ SWAB, TAG FL LEVEL @ 3300'. MADE SEVERAL SWAB RUNS, COLLECTED NATIVE FL SAMPLE FOR ANALYSIS. ON SITE FL WT OF 9.5 PPG. TOH W/ TBG. PU 10-3/4" TENSION PKR. TIH TO APPROX 3620'. SIFN.

1/12-13/98

NO WORK DONE.

1/14/98

RIH W/ SWAB. TAG FL @ 3000'. SWAB DN 3500', SET 10-3/4" PKR @ 3605' W/ 40,000# TENSION. FILL TBG W/ LEASE WTR & ESTABLISH PUMP IN RATE - 1-1/2 BPM, 1050#. NO BLOW ON CSG. PKR SET OK. SD PUMP. WELL WENT ON VACUUM IN 1 HR. SIFN.

1/15/98

FILLED UP TBG W/ 1.4 BBLs LS WTR. EST PUMP IN RATE - 1.7 BPM, 1300#. ND BOPS, NU TREE W/ MASTER VALVE. RU BJ. ACIDIZED 3570' - 3720' W/ 5000 GALS 7-1/2% HCL. FINAL PUMP IN RATE - 5.2 BPM, 1500#. DISPLACE W/ 50 BBLs LS WTR. RIG DN BJ. RIG DN, RELEASE RIG.

1/16/98

TESTED INJECTIVITY @ 2-1/2 BPM, 1800#. NO OTHER WORK PERFORMED. FINAL REPORT.

**NOTE:** INJECTION PERMIT WAS FILED ON 2/26/98 AND APPROVED ON 5/12/98.

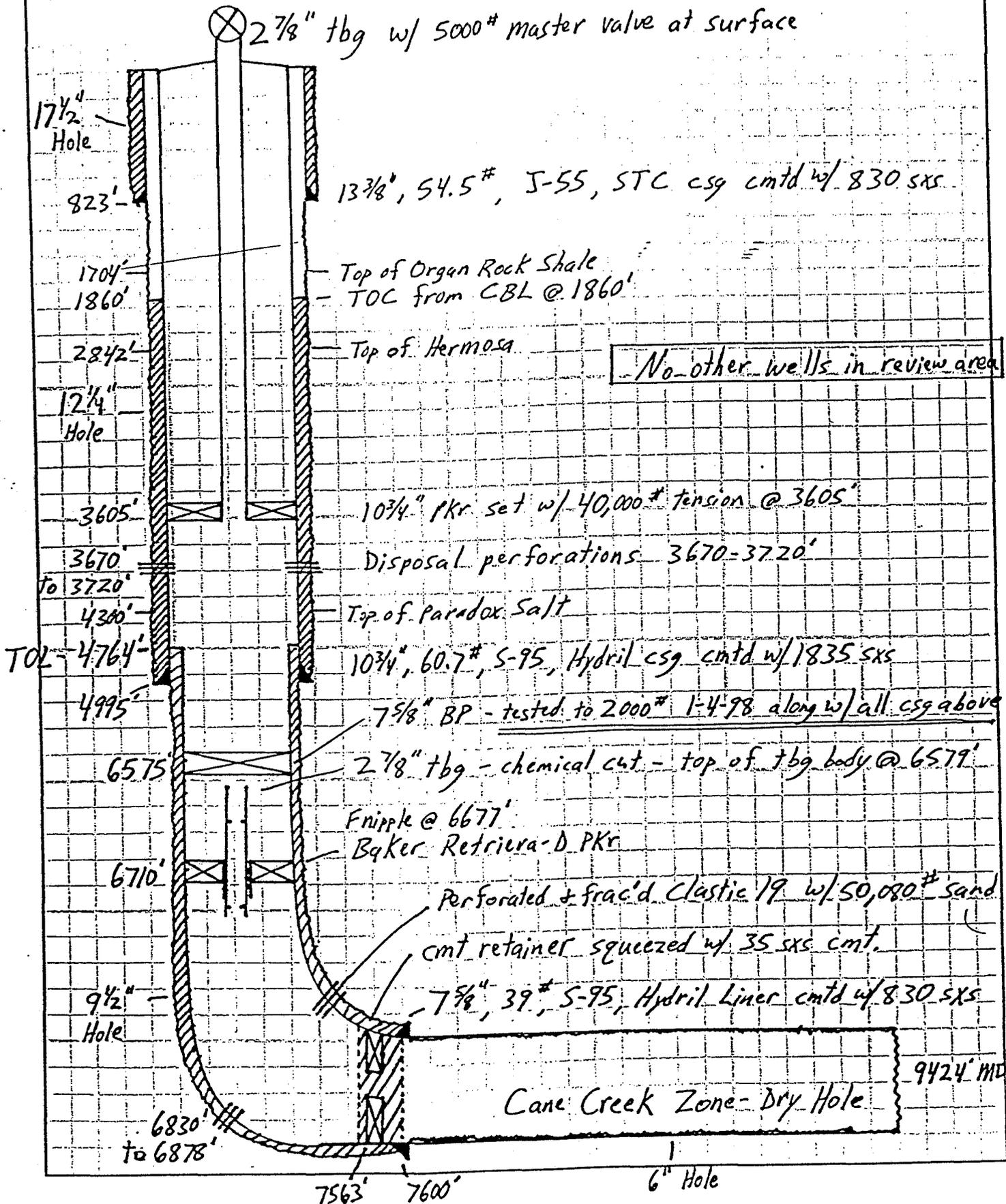
SUBJECT Kane Springs Federal Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

AFE NO. \_\_\_\_\_

Wellbore diagram for proposed SWD

BY MDS DATE 2-2-98



**Aviara Energy  
Corporation**

February 22, 1999

State of Utah  
Division of Oil, Gas, & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

Attention: Mr. Chris Kierst

Reference: Kane Springs Unit 16-1  
Sec. 16 T25S R18E  
Grand County, Utah

Dear Mr. Kierst:

Enclosed please find the original and three copies of the subsequent report, Form 9, "Sundry Notices and Reports on Wells" for above referenced well. This report is being filed as per your telephone conversation with Mark Swisher, Petroleum Engineer, Aviara Energy Corporation.

Please contact Mr. Swisher or myself at 713-871-3400 should you have any questions or require additional information. Thank you for your assistance.

Very truly yours,

AVIARA ENERGY CORPORATION

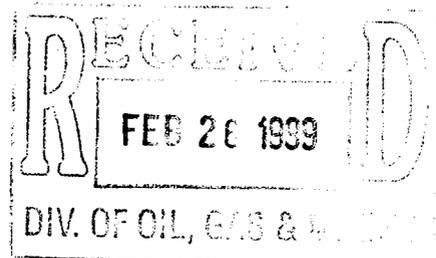


Victoria Guidry  
Production/Regulatory Coordinator

/v/jg

Enclosures

U:\user\...regl033a



STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number  
**ML-44333**

6. Indian, Allottee or Tribe Name:  
**NA**

7. Unit Agreement Name:  
**Kane Springs Federal Unit**

8. Well Name and Number:  
**Kane Springs Unit 16-1 SWD**

9. API Well Number:  
**43 019 31341**

10. Field and Pool, or Wildcat  
**Wildcat**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such purposes

1. Type of Well: OIL  GAS  OTHER:  **Salt Water Injection Well**

2. Name of Operator  
**Aviara Energy Corporation**

3. Address and Telephone Number.  
**P.O. Box 1350, Houston TX 77251-1350 713-871-3444**

4. Location of Well  
Footages: **960' FSL & 1960' FWL** County: **Grand**  
QQ,Sec., T., R., M.: **SE SW Sec. 16 T25S R18E** State: **Utah**

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

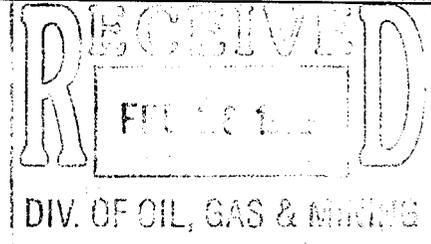
NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
<input type="checkbox"/> Abandon	<input type="checkbox"/> New Construction	<input type="checkbox"/> Abandon*	<input type="checkbox"/> New Construction
<input type="checkbox"/> Repair Casing	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Repair Casing	<input type="checkbox"/> Pull or Alter Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Perforate
<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Perforate	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Vent or Flare
<input type="checkbox"/> Fracture Treat or Acidize	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat or Acidize	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input checked="" type="checkbox"/> Other: <b>Casing Integrity Test and Monitoring</b>	
<input type="checkbox"/> Other _____			
Approximate date work will start _____		Date of work completion <b>01/16/98</b>	
		Report results of <b>Multiple Completions</b> and <b>Recompletions</b> to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.	
		* Must be accompanied by a cement verification report.	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) **See previously submitted workover operations 1/3/98 to 1/16/98.**

**10-3/4" csg tested 1/4/98 to 2000 psi for 20 minutes from surface to BP @ 6575' to insure csg integrity -Held OK. 10-3/4" pkr (9.66" ID of csg) was set in 40,000# tension @ 3605' on 2-7/8" tbg. Did not set in compression since injection force (1400 psi over 9.66" pkr) would be greater than tbg wt. (6.5#/ft) causing pkr to unset. Tested pkr by pumping @ 1800 psi down tbg & monitoring csg annulus-no flow or blow 1/16/98. Could not fill annulus with water to test pkr because hydrostatic head of 1500 psi applied to 10-3/4" pkr (9.66" - 2-7/8") would yield a force of 104,000#. This force plus the 40,000# already pulled on the pkr, plus another 20,000# from testing annulus to 300 psi, would total 164,000# vs. the 145,000# yield strength of new N-80 tbg (used tbg is actually being used). These tests verified that the 10-3/4" csg has integrity up to 2000 psi, and the 10-3/4" pkr is set, giving isolation between injection stream and csg annulus. The csg annulus pressure is monitored every day that SW is injected, & any tbg or pkr leak will be detected by an increase in press since the injection press inside the tbg is 1000-1400 psi.**

13. Name & Signature *Victoria Guidry* Title **Prod/Regulatory Coord.** Date **2/19/99**

(This space for State use only)



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>SWD</u>		5. LEASE DESIGNATION AND SERIAL NUMBER ML-44333
2. NAME OF OPERATOR Aviara Energy Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME NA
3. ADDRESS OF OPERATOR P.O. Box 1350 CITY Houston STATE TX ZIP 77251-1350		7. UNIT or CA AGREEMENT NAME: formerly Kane Springs Fed
PHONE NUMBER (713) 871-3400		8. WELL NAME and NUMBER: Kane Springs Federal Unit
4. LOCATION OF WELL FOOTAGES AT SURFACE: 960' FSL & 1960' FWL		9. API NUMBER: 43 019 3134//
QUAD/CTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 16 25S 18E		10. FIELD AND POOL OR WILDCAT: Wildcat
COUNTY: Grand		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>ASAP</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORM
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TURNING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input checked="" type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: <u>change zones</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

1. Move in, Rig up
2. ND tree, NU BOP's
3. Unset pkr @ 3605', TOO H w/tbg, LD pkr and redress
4. RIH w/ csg gun and perf 1642-46' w/ 4 spf.
5. Establish circulation up 10-3/4" x 13-3/8" annulus
6. RIH w/ cmt retainer and set at 1635'
7. TIH w/ tbg, sling into retainer, and establish circulation up 10-3/4" x 13-3/8" annulus.
8. Test 10-3/4" csg annulus to 1500#.
9. Mix and pump 300 sx cement and displace down tbg to cmt retainer.
10. Sting out of retainer and reverse tbg clean, TOO H w/ tbg.
11. RIH w/ csg gun and perf 1490-1520' 4 spf for injection.
12. PU used SN, 3 jts tbg, 10-3/4" pkr, and TIH w/ tbg.
13. Swab zone until formation sample is collected for analysis.
14. Set pkr in 40,000# tension-100' above top perforation, after spacing out at surface for tbg head.
15. Test pkr by pumping w/ pressure down tbg and monitoring annulus for any flow.
16. ND BOP's and NU tree. Pump 50 bbis pkr fluid w/ inhibitor down csg.
17. Test injectivity w/ lease SW
18. SJ and wait for SWD permit

NAME (PLEASE PRINT) Donny Worthington TITLE Manager, Environmental, Safety and Regula  
SIGNATURE *Donny Worthington* DATE 11/28/2000

(This space for State use only)

Approved by the  
Utah Division of  
Oil, Gas and Mining

RECEIVED  
11-29-00  
C. H. H.

RECEIVED

NOV 29 2000

Aviara Energy Corporation  
Kane Springs Unit #16-1 SWD well  
Sec. 16 T25S R18E  
Grand County, Utah

Re. Disposal Zone change

I have looked at the Geological implications of moving the current disposal zone from the Honaker Trail to the proposed Cutler Formation. The top of the Cutler formation in the #16-1 is at 1472' (+3692' SS) and is approximately 2200' above our present disposal perfs. The Cutler Formation outcrops at the surface 10 miles to the southeast at the Colorado River below Dead horse State Park. I have constructed a regional Cutler structure map, which shows that the Dead Horse area is high in the subsurface with Northwest dip of over 980' toward the Aviara #16-1 SWD well. Between the Cutler outcrop at Dead Horse State Park and the Aviara #16-1 SWD, the Cane Creek Anticline bisects this area with the #16-1 lying on the north flank of the anticline. From these findings, any fluid movement of disposed salt water in the Cutler Formation should move toward the North-Northwest.

Jon B. Norman  
Senior Geologist  
11/6/00

**RECEIVED**

NOV 29 2000

DIVISION OF  
OIL, GAS AND MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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NAME (PLEASE PRINT) Donny Worthington TITLE Manager, Environmental, Safety and Regulatory  
SIGNATURE *Donny Worthington* DATE 11/28/2000

(This space for State use only)

Approved by the  
Utah Division of  
Oil, Gas and Mining

COPY SENT TO OPERATOR  
Date: 12-5-00  
Initials: CHD

**RECEIVED**

NOV 29 2000

(5/2000)

Date: 12-4-2000  
By: *P. J. ...*

(See Instructions on Reverse Side)

DIVISION OF  
OIL, GAS AND MINING

Aviara Energy Corporation  
Kane Springs Unit #16-1 SWD well  
Sec. 16 T25S R18E  
Grand County, Utah

Re: Disposal Zone change

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Jon B. Norman  
Senior Geologist  
11/6/00

**RECEIVED**

NOV 29 2000

DIVISION OF  
OIL, GAS AND MINING



2080 SOUTH 1600 EAST  
VERNAL, UTAH 84078

Disposal Zone Sample

### Water Analysis Report

Telephone (435) 789-4327

**Customer :** Avlara Energy Corp.

**Date Sampled :** 21-Dec-00

**Address :**

**Date Reported :** 08-Jan-01

**City :** Moab

**Date Received :** 02-Jan-01

**State :** UT

**Postal Code :**

**Field :** Kane Springs Unit

**Lease :** Kane Springs Unit

**Attention :** Mark Swisher

**Location :** WELL NO. # 16-1

**cc1 :** Charlie Harrison

**Sample Point :** wellhead

**cc2 :**

**Salesman :** Clay Bingham

**cc3 :**

**Comments :**

**Analyst :** Karen Hawkins Allen

#### CATIONS

#### ANIONS

**Calcium :** 12,240 mg/l  
**Magnesium :** 488 mg/l  
**Barium :** 0 mg/l  
**Strontium :** 0 mg/l  
**Iron :** 56.0 mg/l  
**Sodium :** 7145 mg/l

**Chloride :** 33,200 mg/l  
**Carbonate :** 0 mg/l  
**Bicarbonate :** 354 mg/l  
**Sulfate :** 923 mg/l

**pH (field) :** 6.30  
**Temperature :** 65 degrees F  
**Ionic Strength :** 0.98  
**Resistivity :** ohm/meters  
**Ammonia :** ppm

**Specific Gravity :** 1.0500 grams/ml  
**Total Dissolved Solids :** 54,404 ppm  
**CO2 in Water :** 44 mg/l  
**CO2 in Gas :** 0.03 mole %  
**H2S in Water :** 119.0 mg/l  
**Dissolved Oxygen :** ppm

#### SI calculations based on Tomson-Odde parameters

**Calcite (CaCO3) SI :** 0.20  
**Calcite (CaCO3) SI @ 100 F :** 0.56  
**Calcite (CaCO3) SI @ 120 F :** 0.77  
**Calcite (CaCO3) SI @ 140 F :** 0.99  
**Calcite (CaCO3) SI @ 160 F :** 1.21  
**Gypsum (CaSO4) SI :** -0.04  
**Barite (BaSO4) SI :** N/A  
**Celestite (SrSO4) SI :** N/A

**Calcite PTB :** 41.3  
**Calcite PTB @ 100 F :** 96.1  
**Calcite PTB @ 120 F :** 119.1  
**Calcite PTB @ 140 F :** 138.2  
**Calcite PTB @ 160 F :** 152.5  
**Gypsum PTB :** N/A  
**Barite PTB :** N/A  
**Celestite PTB :** N/A

**Confidential**  
Champion Technologies, Inc.  
Vernal District Technical Services

## Water Analysis, Scaling Tendency, and Compatibility Evaluation

Company: Avicara Energy Corporation

Field / Lease: Kane Springs Unit

Service Engineer: Clay Bingham

Chemical Component	Consolidated Water	90% A		80% A		70% A		60% A		50% A		40% A		30% A		20% A		10% A		Well 16-1
		10% B	20% B	30% B	40% B	50% B	60% B	70% B	80% B	90% B										
Chloride (Cl) mg/l	138,000	127,520	117,040	106,560	96,080	85,600	75,120	64,640	54,160	43,680	33,200									
Sulfate (SO4) mg/l	280	344	409	473	537	602	666	730	794	859	923									
Carbonate (CO3) mg/l	0	0	0	0	0	0	0	0	0	0	0									
Bicarbonate (HCO3) mg/l	146	167	188	209	229	250	271	292	312	333	354									
Calcium (Ca) mg/l	10200	10404	10608	10812	11016	11220	11424	11628	11832	12036	12240									
Magnesium (Mg) mg/l	267	289	311	333	355	377	398	420	442	464	486									
Iron (Fe) mg/l	85.0	82.1	79.2	76.3	73.4	70.5	67.6	64.7	61.8	58.9	56.0									
Barium (Ba) mg/l	0	0	0	0	0	0	0	0	0	0	0									
Strontium (Sr) mg/l	0	0	0	0	0	0	0	0	0	0	0									
Sodium (Na) mg/l	77,471	70,438	63,405	56,372	49,340	42,307	35,274	28,241	21,209	14,176	7,143									
Ionic Strength	4.17	3.88	3.59	3.31	3.02	2.73	2.45	2.16	1.87	1.58	1.30									
Dissolved Solids (TDS)	228,449	208,244	192,039	174,835	157,630	140,425	123,221	106,016	88,812	71,607	54,402									
Specific Gravity @ 60F	1.230	1.212	1.194	1.176	1.158	1.140	1.122	1.104	1.086	1.068	1.050									
Temperature (F)	65	65	65	65	65	65	65	65	65	65	65									
Is (TOMSON-ODDO)	2.14	2.16	2.21	2.24	2.27	2.30	2.34	2.38	2.44	2.51	2.60									
Pressure (psia)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7									
pH Calculated (Tomson)	8.51	8.55	8.58	8.60	8.63	8.65	8.67	8.70	8.72	8.74	8.77									
pH Actual	8.20	6.21	6.22	6.23	6.24	6.25	6.26	6.27	6.28	6.29	6.30									
% CO2 (Mole %)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03									

### Scaling Tendency (Pounds per Thousand BBLs of Scale Which Should Form)

CaCO3 (Tomson-Oddo)	83.0	94.9	106.8	118.8	130.7	142.6	154.5	166.5	178.5	190.5	202.5
BaSO4 (Tomson)	-0.8	-0.7	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.2
CaSO4 (Tomson)	-829.6	-786.7	-736.5	-678.5	-612.7	-539.2	-458.5	-371.9	-281.3	-190.3	-104.8
SrSO4 (Tomson)	-208.8	-206.0	-202.3	-198.4	-192.9	-185.8	-178.6	-165.5	-152.4	-137.5	-121.4

Compatibility Evaluation (Pounds per Thousand BBLs of Scale Due to Mixing, C=compatible)

CaCO3 (Tomson-Oddo)	47.3551	58.8559	-0.0872	42.7935	45.1831	47.5817	49.9807	52.4108	54.8419	57.2825	59.7282
BaSO4 (Tomson)	C	C	C	C	C	C	C	C	C	C	C
CaSO4 (Tomson)	C	C	C	C	C	C	C	C	C	C	C
BrSO4 (Tomson)	C	C	C	C	C	C	C	C	C	C	C

RECEIVED TIMEJAN. 9. 4:17PM

PRINT TIMEJAN. 9. 4:18PM

CK

BEFORE THE DIVISION OF OIL, GAS AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH

---ooOoo---

IN THE MATTER OF THE	:	NOTICE OF AGENCY
APPLICATION OF AVIARA ENERGY	:	ACTION
CORP. FOR ADMINISTRATIVE	:	
APPROVAL AMENDING THE CLASS	:	CAUSE NO. UIC-208
II INJECTION PERMIT OF THE KANE	:	
SPRINGS FEDERAL UNIT 16-1 WELL	:	
LOCATED IN SECTION 16,	:	
TOWNSHIP 25 SOUTH, RANGE 18	:	
EAST, SALT LAKE, GRAND	:	
COUNTY, UTAH,	:	

---ooOoo---

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

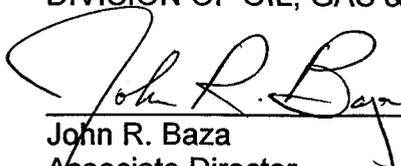
Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Aviara Energy Corp. for administrative approval of the Kane Springs Federal Unit 16-1 well, located in Section 16, Township 25 South, Range 18 East, Grand County, Utah, for amendment of the Class II Injection Permit. The proceeding will be conducted in accordance with Utah Admin. R649-10, Administrative Procedures.

Selective zones in the Cutler Formation will be used for water injection. The maximum requested injection pressure and rate will be determined based on fracture gradient information submitted by Aviara Energy Corp.

Any person desiring to object to the application or otherwise intervene in the proceeding, must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedural rules. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 31 day of JANUARY, 2001.

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING




---

John R. Baza  
Associate Director

**Aviara Energy Corp.  
Kane Springs Federal Unit 16-1  
Cause No. UIC-208**

Publication Notices were sent to the following:

Aviara Energy Corp.  
PO Box 1350  
Houston, TX 77251-1350

via fax (435) 259-8841  
The Times-Independent  
35 East Center PO Box 129  
Moab, UT 84532-0129

via E-Mail and Facsimile (801) 237-2776  
Salt Lake Tribune  
PO Box 45838  
Salt Lake City, UT 84145

Moab District Office  
Bureau of Land Management  
82 East Dogwood  
Moab, UT 84532

Grand County Assessor  
125 East Center St  
Moab, UT 84532

Dan Jackson  
US EPA Region VIII, Suite 5000  
999 18th Street  
Denver, CO 80202-2466

  
Earlene Russell  
Secretary  
February 1, 2001

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-44333</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>NA</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>SWD</u>		7. UNIT or CA AGREEMENT NAME: <b>formerly Kane Springs Fed. Unit</b>
2. NAME OF OPERATOR: <b>Aviara Energy Corporation</b>		8. WELL NAME and NUMBER: <b>Kane Springs Fed Unit 16-1 SWD</b>
3. ADDRESS OF OPERATOR: <b>P. O. Box 1350</b> CITY <b>Houston</b> STATE <b>TX</b> ZIP <b>77251-1350</b>		9. API NUMBER: <b>4301931341</b>
		10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>960 FSL &amp; 1960 FWL</b>		COUNTY: <b>Grand</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESW 16 25S 18E</b>		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start:  _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <b>12/14/2000</b>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input checked="" type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: <u>Change Zones</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

See the attached Summary of Operations Performed

1 original + 3 copies

RECEIVED

JAN 16 2001

DIVISION OF  
OIL, GAS AND MINING

NAME (PLEASE PRINT) <u>Victori</u>	Production/Regulatory Coordinator
SIGNATURE <u>Vic</u>	1/12/2001

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-44333</b>
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>NA</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		7. UNIT or CA AGREEMENT NAME: <b>formerly Kane Springs Fed. Unit</b>
		8. WELL NAME and NUMBER: <b>Kane Springs Fed Unit 16-1 SWD</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>SWD</u>	9. API NUMBER: <b>4301931341</b>	
2. NAME OF OPERATOR: <b>Aviara Energy Corporation</b>	10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b>	
3. ADDRESS OF OPERATOR: <b>P. O. Box 1350</b> CITY <b>Houston</b> STATE <b>TX</b> ZIP <b>77251-1350</b>	PHONE NUMBER: <b>(713) 871-3400</b>	

4. LOCATION OF WELL

FOOTAGES AT SURFACE: **960' FSL & 1960' FWL** COUNTY: **Grand**

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: **SESW 16 25S 18E** STATE: **UTAH**

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

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<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
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	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <b>12/14/2000</b>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input checked="" type="checkbox"/> WATER DISPOSAL
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	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: <u>Change Zones</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

See the attached Summary of Operations Performed

**RECEIVED**  
**JAN 16 2001**  
DIVISION OF  
OIL, GAS AND MINING

NAME (PLEASE PRINT) <u>Victoria Guidry</u>	TITLE <u>Production/Regulatory Coordinator</u>
SIGNATURE <u><i>Victoria Guidry</i></u>	DATE <u>1/12/2001</u>

(This space for State use only)

# AVIARA ENERGY CORPORATION REPORT OF DRILLING IN PROGRESS

January 11, 2001

## OPERATED

### RECOMPLETION

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

**REPORT DATE : 12/8/00** MD : 0 TVD : 0 DOL : 0 DSS : 0 PROGRESS : 0 HRS :  
DAILY COST : \$9,040 CUM COST : \$9,040 MW : VISC :

DAILY DETAILS : RU KEY, ND WELLHEAD, NU BOPS. ATT TO UNSEAT PKR & TOH W/ TBG. STAND BACK 26 STDS, LD 41 JTS TBG. TBG BACKED OFF, LEFT ABOUT 20 JTS & 3-1/2 X 10-3/4" D&L SL NON-SHEAR PKR SET @ 3605'. 2-7/8" COLLAR LOOKING UP. RU RMWL, RIH & PERF 1642-46' W/ 4 SPF. PUMP 225 BBLS DOWN 10-3/4" CSG TO GET BLOW UP 13-3/8" X 10-3/4" ANNULUS. SDFN.

**REPORT DATE : 12/9/00** MD : 0 TVD : 0 DOL : 1 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$15,270 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : PU BAKER 10-3/4" CMT RTNR & TIH W/ TBG. SET RTNR @ 1611'. FILL ANN W/ 60 BBLS & TEST 10-3/4" CSG & RTNR TO 1500# - HELD OK. BLED TO 300#. RU HALLIBURTON, BRK CIRC - PIR 3.5 BPM, 200# TP, TAKING RETURNS UP 13-3/8" X 10-3/4" ANNULUS. M&P 300 SXS 50/50 POZ W/ 2% GEL & 3% SALT, 1.18 YLD, 14.5 PPG. DISPLACE CMT W/ 10.8 BBLS FW - BELOW RTNR. SD PUMP & STING OUT OF RTNR. BLED BACK 475# TP & RD HALLIBURTON. TOH W/ TBG & SETTING TOOL. SDFN.

**REPORT DATE : 12/10/00** MD : 0 TVD : 0 DOL : 2 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$0 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

**REPORT DATE : 12/11/00** MD : 0 TVD : 0 DOL : 3 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$0 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

**REPORT DATE : 12/12/00** MD : 0 TVD : 0 DOL : 4 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$7,367 CUM COST : \$31,677 MW : VISC :

DAILY DETAILS : RU RMWL & RUN CBL, CMT GOOD. RIH & PERF 1505-20' W/ 4 SPF. MAKE 2ND RUN & PERF 1490-1505'. RD RMWL. PU SN & TIH W/ 2-7/8" TBG TO BTM. SDFN.

**REPORT DATE : 12/13/00** MD : 0 TVD : 0 DOL : 5 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$3,098 CUM COST : \$34,775 MW : VISC :

DAILY DETAILS : SWAB ON WELL 7 HRS. FLUID LEVEL STABILIZED @ 1200'. RECOVERED 150 BBLS TOTAL, 30 BBLS FORMATION WATER @ 8.6 PPG. CAUGHT SAMPLE FOR ANALYSIS, TOH W/ TBG. SDFN.

*I thought this stuff  
was 54000 mg/l TDS*

**AVIARA ENERGY CORPORATION  
REPORT OF DRILLING IN PROGRESS**

January 12, 2001

**OPERATED**

**RECOMPLETION**

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

<b>REPORT DATE : 12/14/00</b>	MD : 0	TVD : 0	DOL : 6	DSS :	PROGRESS: 0	HRS:
DAILY COST : \$9,208		CUM COST : \$43,983			MW :	VISC :

DAILY DETAILS : PU 2 JTS 2-7/8" TBG, 10-3/4" TYPE "H" TENSION PKR & TIH W/ 46 JTS 2-7/8" TBG. SET PKR @ 1463' W/ EOT @ 1526'. ND BOPS, TOOK 142M# PULL TO SET SLIPS, LEFT 20M# TENSION ON PKR. NU TREE & FILL TBG W/ 5 BBLs LSW. PUMP INTO ZONE @ APPROX 1/8 BPM @ 100#. INCREASED TO APPROX 1/4 BPM @ 200# & APPROX 1/2 BPM @ 300#. CHG GEARS & PUMP APPROX 2 BPM @ 400# & APPROX 2-1/2 BPM @ 400#. SD, WELL ON VACUUM. RDMO.  
\*\*\*\*\* FINAL REPORT \*\*\*\*\*

**RECEIVED**

JAN 16 2001

DIVISION OF  
OIL, GAS AND MINING

SUBJECT Kane Springs Federal Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

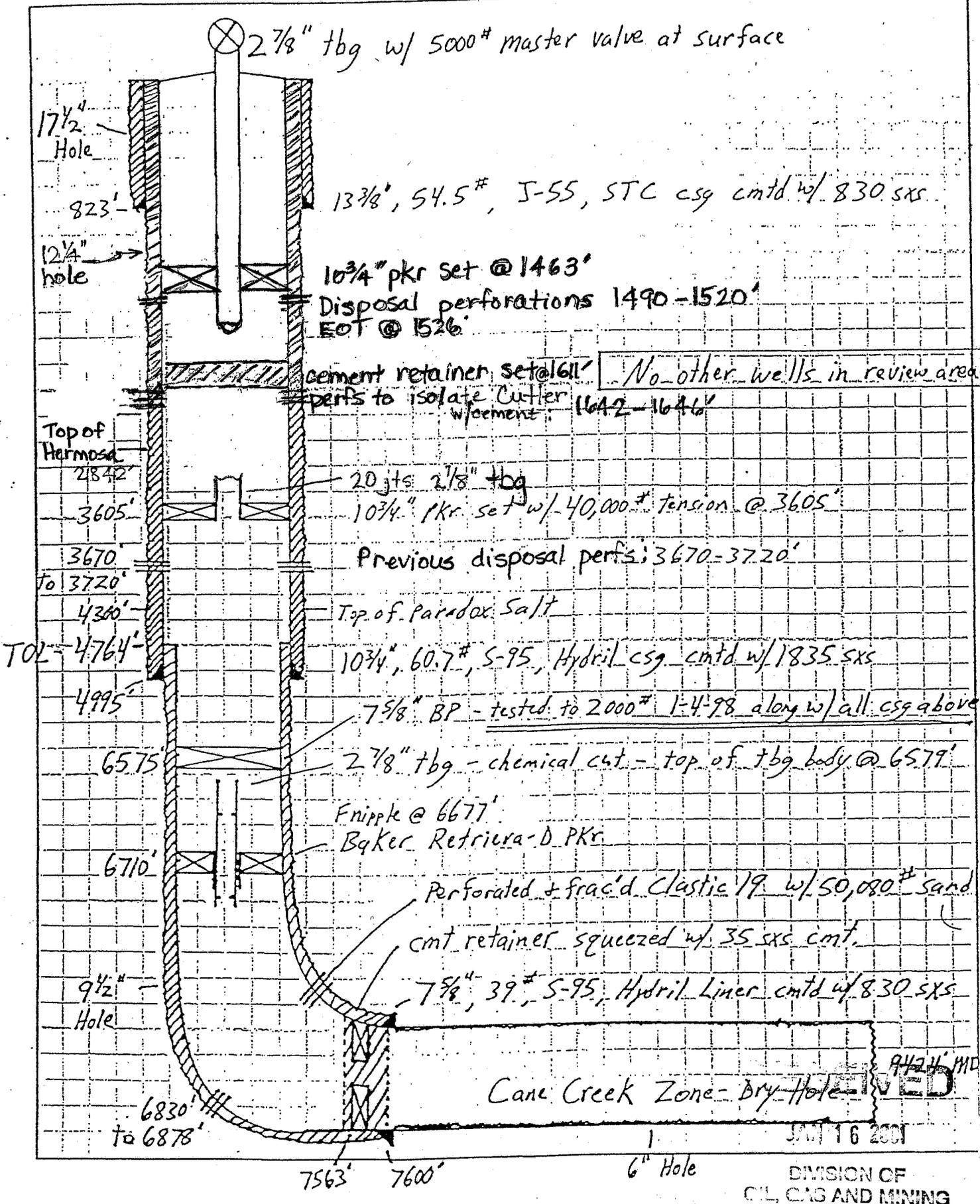
CURRENT

AFE NO. \_\_\_\_\_

Wellbore diagram

BY MDS

DATE 12-14-00



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>SWD</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-44333
2. NAME OF OPERATOR: Aviara Energy Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
3. ADDRESS OF OPERATOR: P. O. Box 1350 CITY: Houston STATE: TX ZIP: 77251-1350		7. UNIT or CA AGREEMENT NAME: formerly Kane Springs Fed. Unit
4. LOCATION OF WELL FOOTAGES AT SURFACE: 960 FSL & 1960 FWL		8. WELL NAME and NUMBER: Kane Springs Fed Unit 16-1 SWD
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 16 25S 18E		9. API NUMBER: 4301931341
COUNTY: Grand		10. FIELD AND POOL, OR WILDCAT: Wildcat
STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
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	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

See the attached Summary of Operations Performed

NAME (PLEASE PRINT) <u>Victoria Guidry</u>	TITLE <u>Production/Regulatory Coordinator</u>
SIGNATURE <u><i>Victoria Guidry</i></u>	DATE <u>1/12/2001</u>

(This space for State use only)

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JAN 16 2001

DIVISION OF  
OIL, GAS AND MINING

# AVIARA ENERGY CORPORATION REPORT OF DRILLING IN PROGRESS

January 11, 2001

## OPERATED

### RECOMPLETION

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

<b>REPORT DATE : 12/8/00</b>	MD : 0	TVD : 0	DOL : 0	DSS : 0	PROGRESS: 0	HRS:
DAILY COST : \$9,040		CUM COST : \$9,040			MW :	VISC :

DAILY DETAILS : RU KEY, ND WELLHEAD, NU BOPS. ATT TO UNSEAT PKR & TOH W/ TBG. STAND BACK 26 STDS, LD 41 JTS TBG. TBG BACKED OFF, LEFT ABOUT 20 JTS & 3-1/2 X 10-3/4" D&L SL NON-SHEAR PKR SET @ 3605'. 2-7/8" COLLAR LOOKING UP. RU RMWL, RIH & PERF 1642-46' W/ 4 SPF. PUMP 225 BBLS DOWN 10-3/4" CSG TO GET BLOW UP 13-3/8" X 10-3/4" ANNULUS. SDFN.

<b>REPORT DATE : 12/9/00</b>	MD : 0	TVD : 0	DOL : 1	DSS :	PROGRESS: 0	HRS:
DAILY COST : \$15,270		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : PU BAKER 10-3/4" CMT RTNR & TIH W/ TBG. SET RTNR @ 1611'. FILL ANN W/ 60 BBLS & TEST 10-3/4" CSG & RTNR TO 1500# - HELD OK. BLED TO 300#. RU HALLIBURTON, BRK CIRC - PIR 3.5 BPM, 200# TP, TAKING RETURNS UP 13-3/8" X 10-3/4" ANNULUS. M&P 300 SXS 50/50 POZ W/ 2% GEL & 3% SALT, 1.18 YLD, 14.5 PPG. DISPLACE CMT W/ 10.8 BBLS FW - BELOW RTNR. SD PUMP & STING OUT OF RTNR. BLED BACK 475# TP & RD HALLIBURTON. TOH W/ TBG & SETTING TOOL. SDFN.

<b>REPORT DATE : 12/10/00</b>	MD : 0	TVD : 0	DOL : 2	DSS :	PROGRESS: 0	HRS:
DAILY COST : \$0		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

<b>REPORT DATE : 12/11/00</b>	MD : 0	TVD : 0	DOL : 3	DSS :	PROGRESS: 0	HRS:
DAILY COST : \$0		CUM COST : \$24,310			MW :	VISC :

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DIVISION OF  
OIL, GAS AND MINING

**AVIARA ENERGY CORPORATION**  
**REPORT OF DRILLING IN PROGRESS**  
 January 12, 2001

**OPERATED**

**RECOMPLETION**

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

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STATE : UTAH	DHC :
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 \*\*\*\*\* FINAL REPORT \*\*\*\*\*

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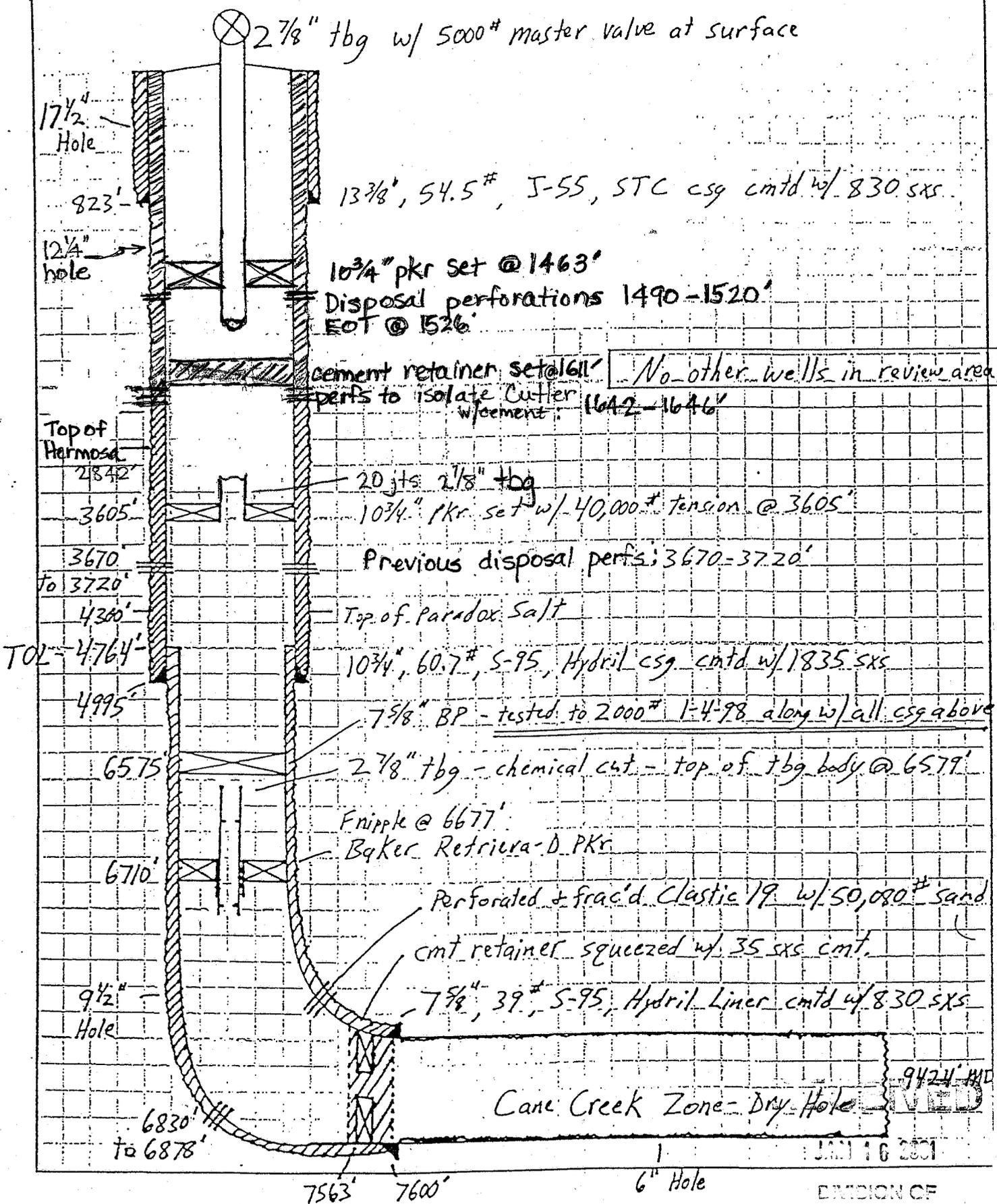
SUBJECT Kane Springs Lateral Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CURRENT Wellbore diagram

A/E NO. \_\_\_\_\_

BY MDS DATE 12-14-00



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

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Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>NA</b>
1. TYPE OF WELL <b>OIL WELL</b> <input type="checkbox"/> <b>GAS WELL</b> <input type="checkbox"/> <b>OTHER</b> <u>SWD</u>		7. UNIT or CA AGREEMENT NAME: <b>formerly Kane Springs Fed. Unit</b>
2. NAME OF OPERATOR: <b>Aviara Energy Corporation</b>		8. WELL NAME and NUMBER: <b>Kane Springs Fed Unit 16-1 SWD</b>
3. ADDRESS OF OPERATOR: <b>P. O. Box 1350</b> CITY: <b>Houston</b> STATE: <b>TX</b> ZIP: <b>77251-1350</b> PHONE NUMBER: <b>(713) 871-3400</b>		9. API NUMBER: <b>4301931341</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>960° FSL &amp; 1960° FWL</b> QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESW 16 25S 18E</b>		10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b> COUNTY: <b>Grand</b> STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <b>12/14/2000</b>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input checked="" type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: <u>Change Zones</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

See the attached Summary of Operations Performed

NAME (PLEASE PRINT) <u>Victoria Guidry</u>	TITLE <u>Production/Regulatory Coordinator</u>
SIGNATURE <u><i>Victoria Guidry</i></u>	DATE <u>1/12/2001</u>

(This space for State use only)

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JAN 16 2001

DIVISION OF  
OIL, GAS AND MINING

# AVIARA ENERGY CORPORATION REPORT OF DRILLING IN PROGRESS

January 11, 2001

## OPERATED

### RECOMPLETION

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

**REPORT DATE : 12/8/00** MD : 0 TVD : 0 DOL : 0 DSS : 0 PROGRESS : 0 HRS :  
DAILY COST : \$9,040 CUM COST : \$9,040 MW : VISC :

DAILY DETAILS : RU KEY, ND WELLHEAD, NU BOPS. ATT TO UNSEAT PKR & TOH W/ TBG. STAND BACK 26 STDS, LD 41 JTS TBG. TBG BACKED OFF, LEFT ABOUT 20 JTS & 3-1/2 X 10-3/4" D&L SL NON-SHEAR PKR SET @ 3605'. 2-7/8" COLLAR LOOKING UP. RU RMWL, RIH & PERF 1642-46' W/ 4 SPF. PUMP 225 BBLs DOWN 10-3/4" CSG TO GET BLOW UP 13-3/8" X 10-3/4" ANNULUS. SDFN.

**REPORT DATE : 12/9/00** MD : 0 TVD : 0 DOL : 1 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$15,270 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : PU BAKER 10-3/4" CMT RTNR & TIH W/ TBG. SET RTNR @ 1611'. FILL ANN W/ 60 BBLs & TEST 10-3/4" CSG & RTNR TO 1500# - HELD OK. BLED TO 300#. RU HALLIBURTON, BRK CIRC -PIR 3.5 BPM, 200# TP, TAKING RETURNS UP 13-3/8" X 10-3/4" ANNULUS. M&P 300 SXS 50/50 POZ W/ 2% GEL & 3% SALT, 1.18 YLD, 14.5 PPG. DISPLACE CMT W/ 10.8 BBLs FW - BELOW RTNR. SD PUMP & STING OUT OF RTNR. BLED BACK 475# TP & RD HALLIBURTON. TOH W/ TBG & SETTING TOOL SDFN.

**REPORT DATE : 12/10/00** MD : 0 TVD : 0 DOL : 2 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$0 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

**REPORT DATE : 12/11/00** MD : 0 TVD : 0 DOL : 3 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$0 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

**REPORT DATE : 12/12/00** MD : 0 TVD : 0 DOL : 4 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$7,367 CUM COST : \$31,677 MW : VISC :

DAILY DETAILS : RU RMWL & RUN CBL, CMT GOOD. RIH & PERF 1505-20' W/ 4 SPF. MAKE 2ND RUN & PERF 1490-1505'. RD RMWL. PU SN & TIH W/ 2-7/8" TBG TO BTM. SDFN.

**REPORT DATE : 12/13/00** MD : 0 TVD : 0 DOL : 5 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$3,098 CUM COST : \$34,775 MW : VISC :

DAILY DETAILS : SWAB ON WELL 7 HRS. FLUID LEVEL STABILIZED @ 1200'. RECOVERED 150 BBLs TOTAL, 30 BBLs FORMATION WATER @ 8.6 PPG. CAUGHT SAMPLE FOR ANALYSIS, TOH W/ TBG. SDFN.

RECEIVED

JAN 16 2001

# AVIARA ENERGY CORPORATION REPORT OF DRILLING IN PROGRESS

January 12, 2001

## OPERATED

### RECOMPLETION

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD :	KANE SPRINGS FIELD	WI% :	45.64000
COUNTY :	GRAND	AFE# :	01255
STATE :	UTAH	DHC :	
LOCATION :	.960' FSL & 1960' FWL; SE/4 OF SW/4	CWC :	\$67,100
PLANNED DEPTH MD :	TVD :	AFE TOTAL :	\$67,100
CONTRACTOR :	KEY	SPUD DATE :	
OBJECTIVE :	CUTLER FORMATION	API# :	

<b>REPORT DATE : 12/14/00</b>	MD : 0	TVD : 0	DOL : 6	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$9,208		CUM COST : \$43,983			MW :	VISC :

DAILY DETAILS : PU 2 JTS 2-7/8" TBG, 10-3/4" TYPE "H" TENSION PKR & TIH W/ 46 JTS 2-7/8" TBG. SET PKR @ 1463' W/ EOT @ 1526'. ND BOPS, TOOK 142M# PULL TO SET SLIPS, LEFT 20M# TENSION ON PKR. NU TREE & FILL TBG W/ 5 BBLs LSW. PUMP INTO ZONE @ APPROX 1/8 BPM @ 100#. INCREASED TO APPROX 1/4 BPM @ 200# & APPROX 1/2 BPM @ 300#. CHG GEARS & PUMP APPROX 2 BPM @ 400# & APPROX 2-1/2 BPM @ 400#. SD, WELL ON VACUUM. RDMO.  
\*\*\*\*\* FINAL REPORT \*\*\*\*\*

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DIVISION OF  
OIL, GAS AND MINING

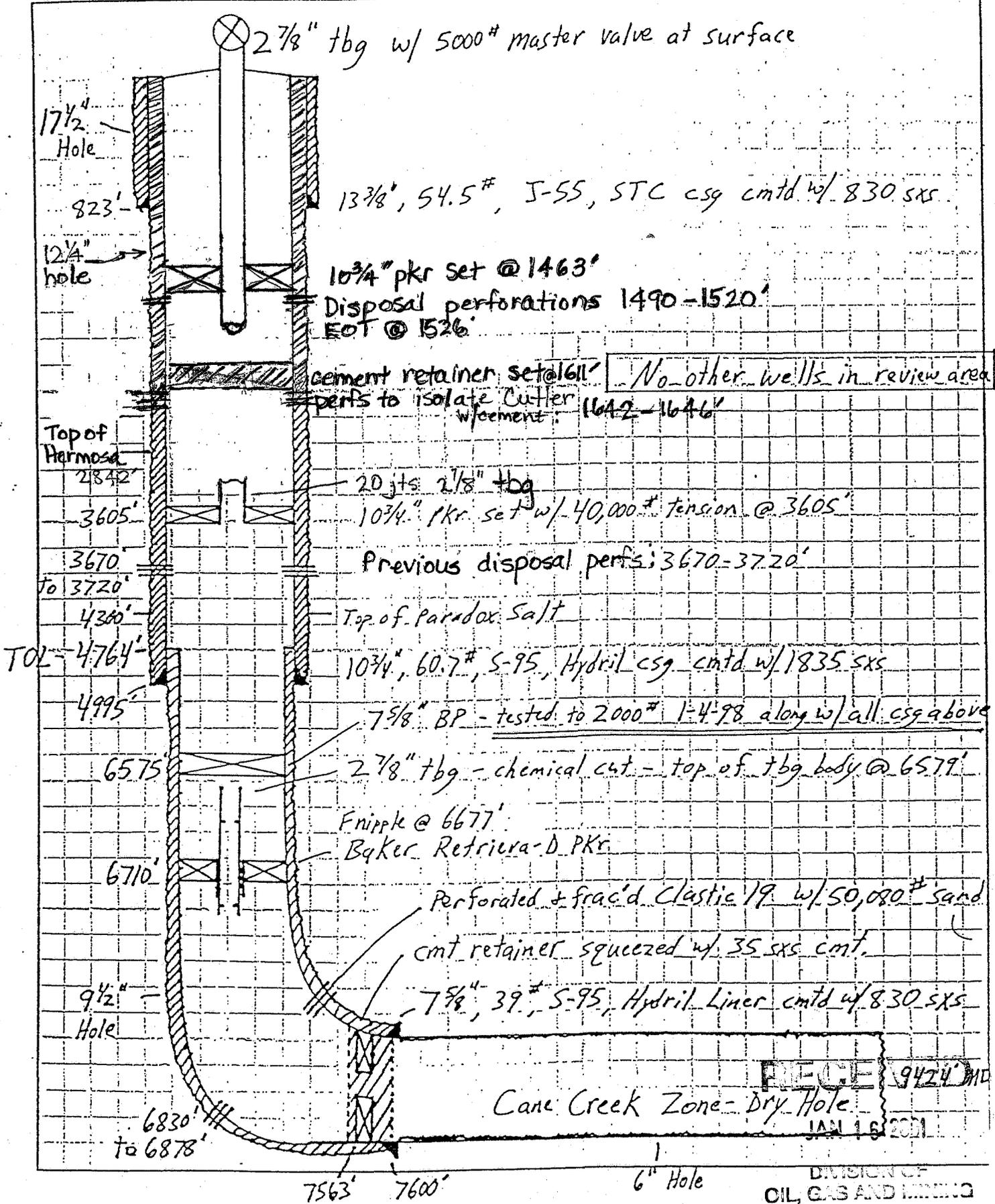
SUBJECT Kane Springs Lateral Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CURRENT  
Wellbore diagram

AFE NO. \_\_\_\_\_

BY MDS DATE 12-14-00



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER:  
ML-44333

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
NA

7. UNIT or CA AGREEMENT NAME:  
formerly Kane Springs Fed. Unit

8. WELL NAME and NUMBER:  
Kane Springs Fed Unit 16-1 SWD

9. API NUMBER:  
4301931341

10. FIELD AND POOL, OR WILDCAT:  
Wildcat

1. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER SWD

2. NAME OF OPERATOR:  
Aviara Energy Corporation

3. ADDRESS OF OPERATOR:  
P. O. Box 1350 CITY Houston STATE TX ZIP 77251-1350 PHONE NUMBER: (713) 871-3400

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: 960 FSL & 1960 FWL COUNTY: Grand  
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 16 25S 18E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
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	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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See the attached Summary of Operations Performed

NAME (PLEASE PRINT) Victoria Guidry TITLE Production/Regulatory Coordinator  
SIGNATURE *Victoria Guidry* DATE 1/12/2001

(This space for State use only)

RECEIVED

JAN 16 2001

DIVISION OF  
OIL, GAS AND MINING

**AVIARA ENERGY CORPORATION**  
**REPORT OF DRILLING IN PROGRESS**  
 January 11, 2001

**OPERATED**

**RECOMPLETION**

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

<b>REPORT DATE : 12/8/00</b>	MD : 0	TVD : 0	DOL : 0	DSS : 0	PROGRESS : 0	HRS :
DAILY COST : \$9,040		CUM COST : \$9,040			MW :	VISC :

DAILY DETAILS : RU KEY, ND WELLHEAD, NU BOPS. ATT TO UNSEAT PKR & TOH W/ TBG. STAND BACK 26 STDS, LD 41 JTS TBG. TBG BACKED OFF, LEFT ABOUT 20 JTS & 3-1/2 X 10-3/4" D&L SL NON-SHEAR PKR SET @ 3605'. 2-7/8" COLLAR LOOKING UP. RU RMWL, RIH & PERF 1642-46' W/ 4 SPF. PUMP 225 BBLs DOWN 10-3/4" CSG TO GET BLOW UP 13-3/8" X 10-3/4" ANNULUS. SDFN.

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DAILY COST : \$15,270		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : PU BAKER 10-3/4" CMT RTNR & TIH W/ TBG. SET RTNR @ 1611'. FILL ANN W/ 60 BBLs & TEST 10-3/4" CSG & RTNR TO 1500# - HELD OK. BLED TO 300#. RU HALLIBURTON, BRK CIRC - PIR 3.5 BPM, 200# TP, TAKING RETURNS UP 13-3/8" X 10-3/4" ANNULUS. M&P 300 SXS 50/50 POZ W/ 2% GEL & 3% SALT, 1.18 YLD, 14.5 PPG. DISPLACE CMT W/ 10.8 BBLs FW - BELOW RTNR. SD PUMP & STING OUT OF RTNR. BLED BACK 475# TP & RD HALLIBURTON. TOH W/ TBG & SETTING TOOL SDFN.

<b>REPORT DATE : 12/10/00</b>	MD : 0	TVD : 0	DOL : 2	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$0		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

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DAILY COST : \$0		CUM COST : \$24,310			MW :	VISC :

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DAILY DETAILS : RU RMWL & RUN CBL, CMT GOOD. RIH & PERF 1505-20' W/ 4 SPF. MAKE 2ND RUN & PERF 1490-1505'. RD RMWL. PU SN & TIH W/ 2-7/8" TBG TO BTM. SDFN.

<b>REPORT DATE : 12/13/00</b>	MD : 0	TVD : 0	DOL : 5	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$3,098		CUM COST : \$34,775			MW :	VISC :

DAILY DETAILS : SWAB ON WELL 7 HRS. FLUID LEVEL STABILIZED @ 1200'. RECOVERED 150 BBLs TOTAL, 30 BBLs FORMATION WATER @ 8.6 PPG. CAUGHT SAMPLE FOR ANALYSIS-TOH W/ TBG. SDFN.

**RECEIVED**

JAN 16 2001

**AVIARA ENERGY CORPORATION  
REPORT OF DRILLING IN PROGRESS  
January 12, 2001**

**OPERATED**

**RECOMPLETION**

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD :	KANE SPRINGS FIELD	WI% :	45.64000
COUNTY :	GRAND	AFE# :	01255
STATE :	UTAH	DHC :	
LOCATION :	960' FSL & 1960' FWL; SE/4 OF SW/4	CWC :	\$67,100
PLANNED DEPTH MD:	TVD :	AFE TOTAL :	\$67,100
CONTRACTOR :	KEY	SPUD DATE :	
OBJECTIVE :	CUTLER FORMATION	API# :	

<b>REPORT DATE : 12/14/00</b>	MD : 0	TVD : 0	DOL : 6	DSS :	PROGRESS: 0	HRS:
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\*\*\*\*\* FINAL REPORT \*\*\*\*\*

**RECEIVED**

**JAN 16 2001**

**DIVISION OF  
OIL, GAS AND MINING**

SUBJECT Kane Springs Lateral Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

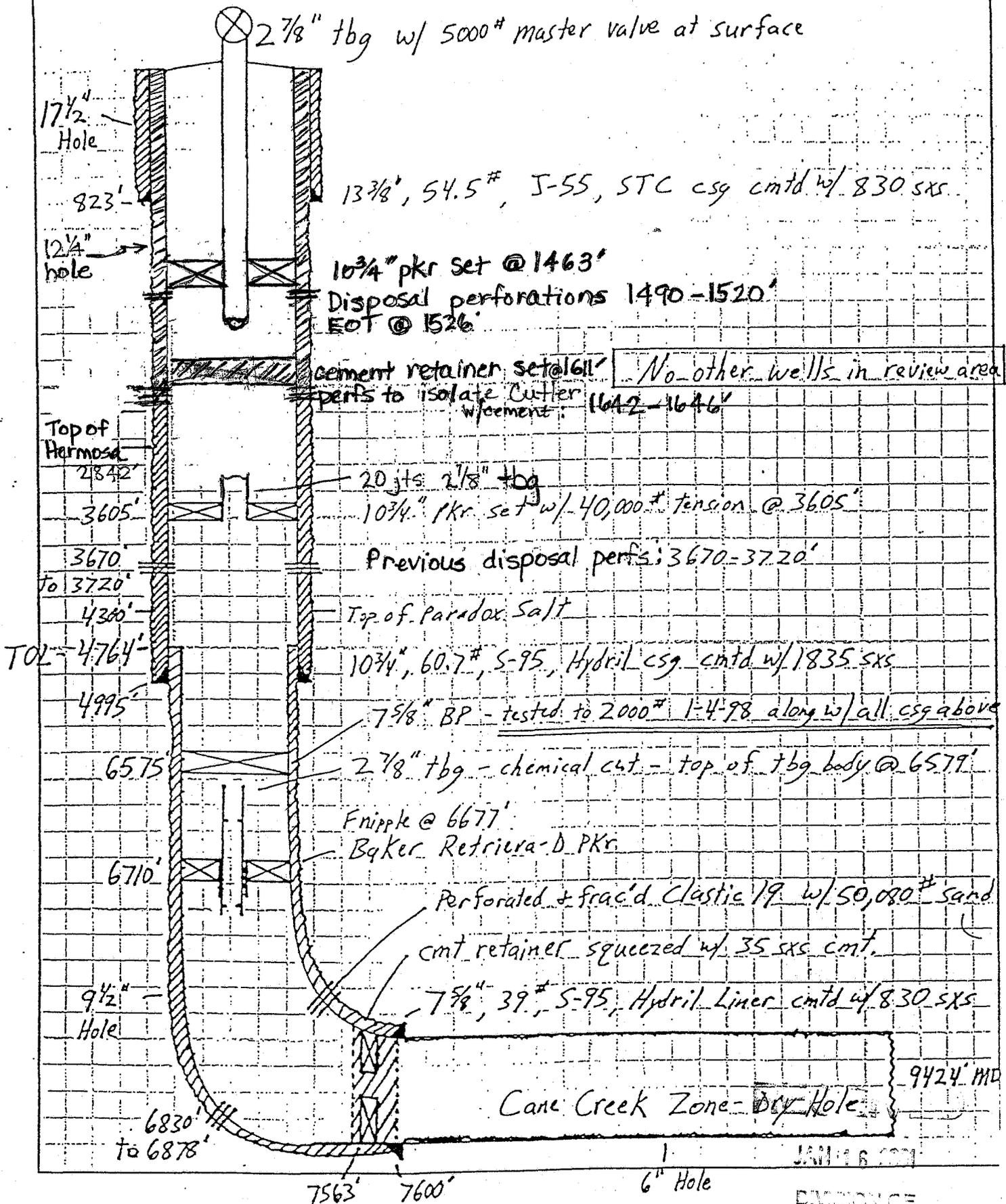
CURRENT

AFE NO. \_\_\_\_\_

Wellbore diagram

BY MDS

DATE 12-14-00



JAN 16 2001

DIVISION OF  
L. CASANOVA

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

**APPLICATION FOR INJECTION WELL**

Name of Operator <b>Aviara Energy Corporation</b>	Utah Account Number <b>N 5500</b>	Well Name and Number <b>Kane Springs Federal Unit 16-1</b>
Address of Operator <b>PO Box 1350</b> CITY <b>Houston</b> STATE <b>TX</b> ZIP <b>77251-1350</b>	Phone Number <b>(713) 871-3400</b>	API Number <b>4301931341</b>
Location of Well Footage : <b>960' &amp; 1960' FWL</b> County : <b>Grand</b>		Field or Unit Name <b>formerly Kane Springs Fed. Unit</b>
QQ, Section, Township, Range: <b>SESW 16 25S 18E</b> State : <b>UTAH</b>		Lease Designation and Number <b>U-44333</b>

Is this application for expansion of an existing project? Yes  No

Change injection zone

Will the proposed well be used for:	Enhanced Recovery?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Disposal?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	Storage?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Is this application for a new well to be drilled? Yes  No

If this application is for an existing well, has a casing test been performed? Yes  No   
Date of test: 12/09/2000

Proposed injection interval: from 1,490 to 1,520

Proposed maximum injection: rate 800 BPD pressure 400 psig

Proposed injection zone contains oil , gas , and / or fresh water  within 1/2 mile of the well.

List of attachments: Location plat, well bore diagram, CBL (12/12/00), fracture information, water analyses, compatibility test, geologic report

**ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES**

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Mark Swisher

Title Production Superintendent

Signature *Mark Swisher*

Date 01/11/2001

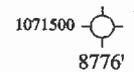
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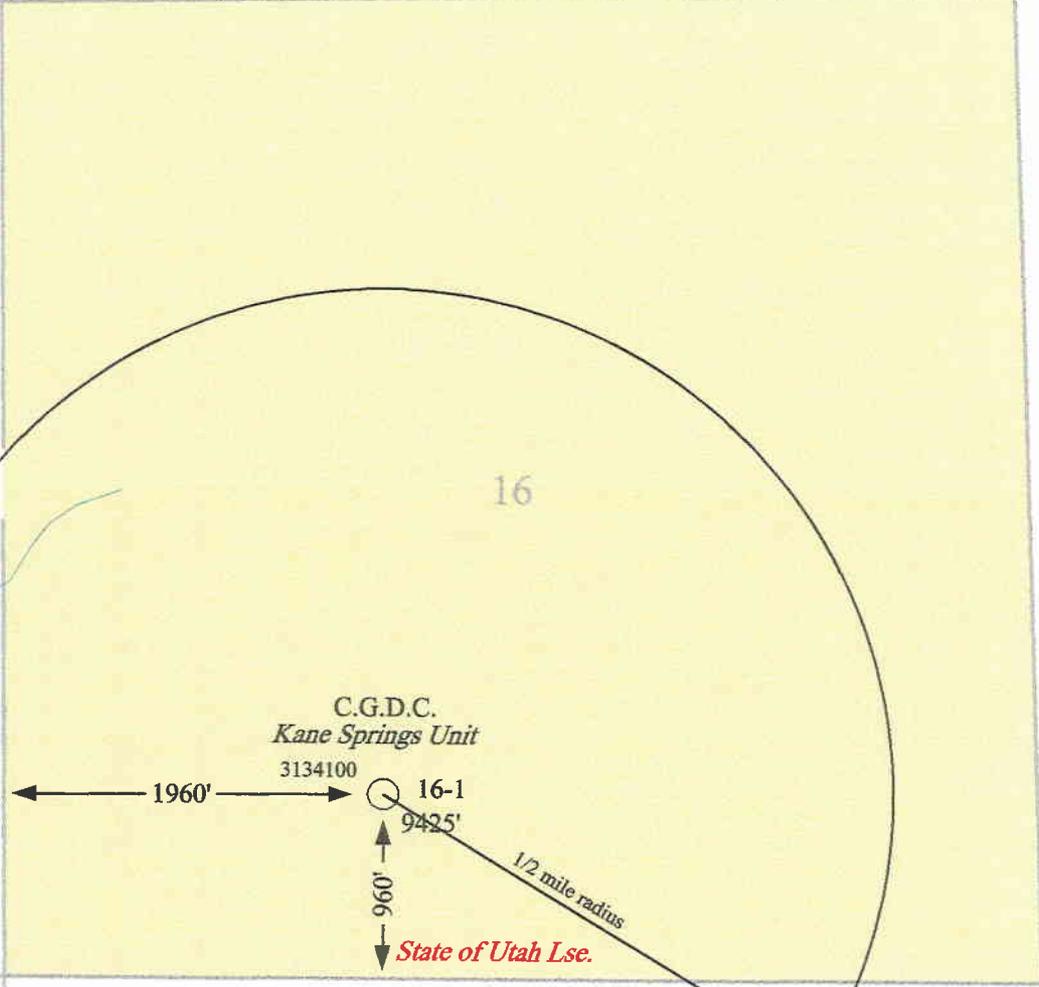
10

MCRAE OIL & GAS CORP  
Mcrae - Federal



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C.G.D.C.  
Kane Springs Unit

3134100

16-1

9425'

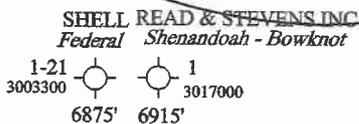
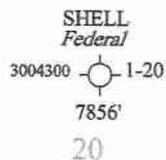
1960'

960'

State of Utah Lse.

1/2 mile radius

Federal Lease



21

Federal Lease

Federal Lease

ALL LEASES OPERATED BY AVIARA ENERGY

**AVIARA**  
ENERGY CORPORATION

KANE SPRINGS  
GRAND COUNTY, UTAH

Proposed  
SALT WATER DISPOSAL WELL

SCALE: 1"=1000'

INTERP. BY: M.D. SWISHER	DATE: 5-FEB-98
DRAFTED BY: S.D.P.	CADFILE: knsp_16-1_dsp1
ACCT: wul	NLXFILE: knsprgs2
	ROT: 1.07040

SUBJECT Kane Springs Lateral Unit #16-1

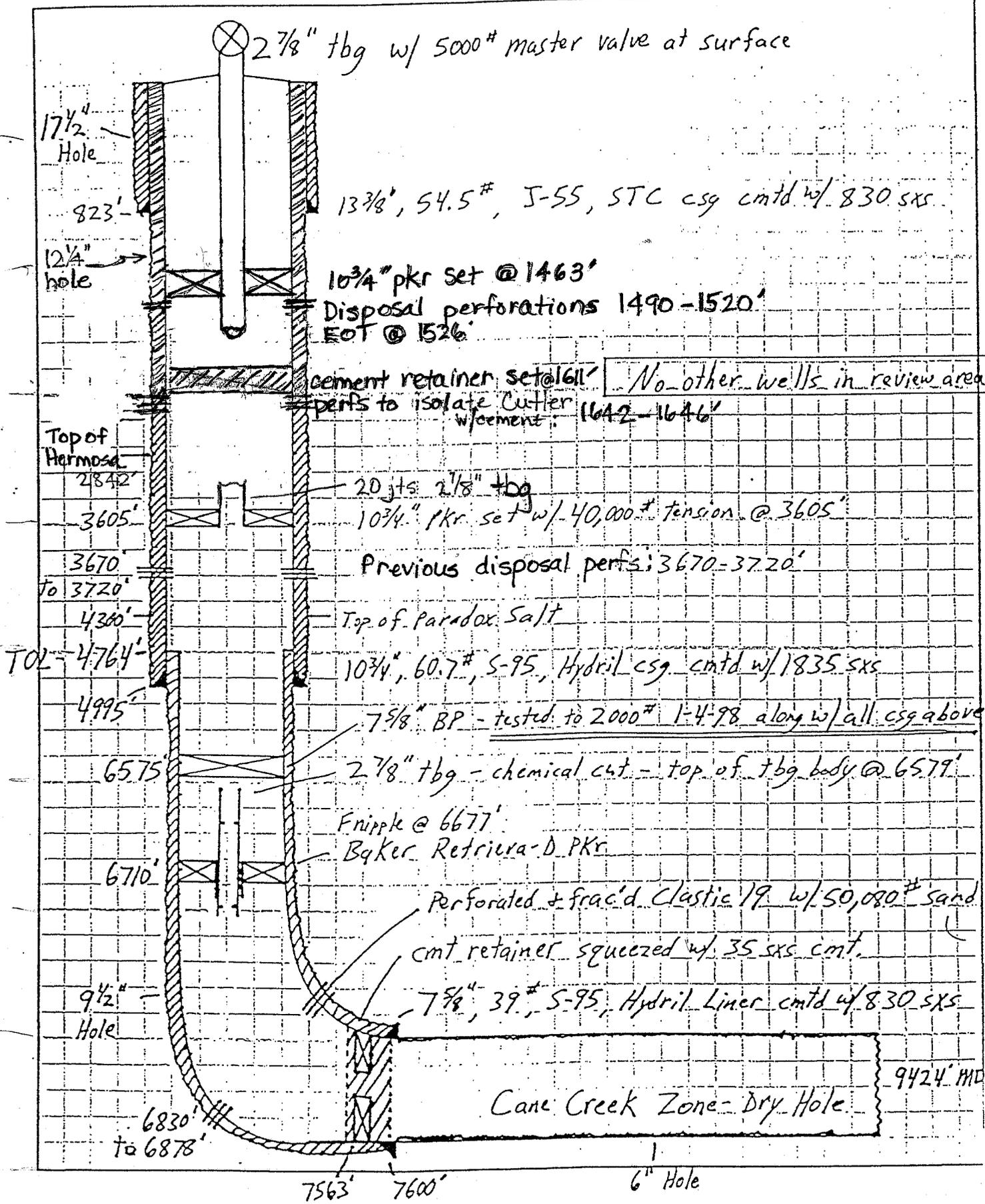
PAGE \_\_\_\_\_ OF \_\_\_\_\_

CURRENT Wellbore diagram

AFE NO. \_\_\_\_\_

BY MDS

DATE 12-14-00



# **AVIARA**

**ENERGY CORPORATION**

Aviara Energy Corporation

Kane Springs Unit #16-1 SWD well  
One Riverway, Suite 700  
Houston, Texas 77056

Sec. 16 T25S R18E  
Grand County, Utah

Re: Disposal Zone change

I have looked at the Geological implications of moving the current disposal zone from the Honaker Trail to the proposed Cutler Formation. The top of the Cutler formation in the #16-1 is at 1472' (+3692' SS) and is approximately 2200' above our present disposal perms. The Cutler Formation outcrops at the surface 10 miles to the southeast at the Colorado River below Dead horse State Park. I have constructed a regional Cutler structure map, which shows that the Dead Horse area is high in the subsurface with Northwest dip of over 980' toward the Aviara #16-1 SWD well. Between the Cutler outcrop at Dead Horse State Park and the Aviara #16-1 SWD, the Cane Creek Anticline bisects this area with the #16-1 lying on the north flank of the anticline. From these findings, any fluid movement of disposed salt water in the Cutler Formation should move toward the North-Northwest.

Jon B. Norman  
Senior Geologist  
11/6/00

SUBJECT Kane Springs Federal Unit #16-1 SWD

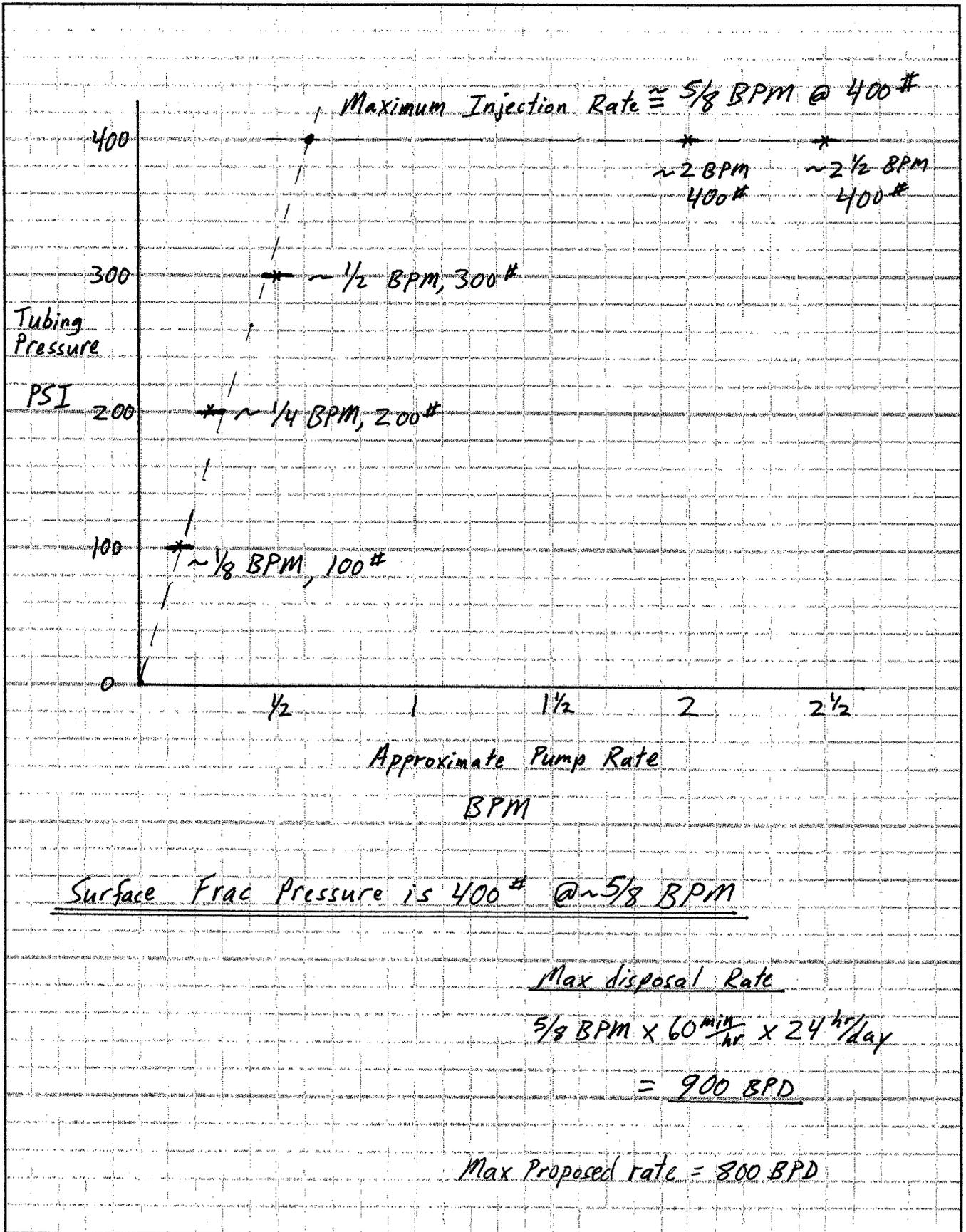
PAGE \_\_\_\_\_ OF \_\_\_\_\_

Injection Break Down Test 12-14-00

AFE NO. \_\_\_\_\_

BY MB

DATE 1-11-01





2080 SOUTH 1500 EAST  
VERNAL, UTAH 84078

Production Water

# Water Analysis Report

Telephone (435) 789-4327

**Customer :** Avlara Energy Corp.

**Date Sampled :** 21-Dec-00

**Address :**

**Date Reported :** 08-Jan-01

**City :** Moab

**Date Received :** 02-Jan-01

**State :** UT **Postal Code :**

**Field :** Kane Springs Unit

**Lease :** Kane Springs Unit

**Attention :** Mark Swisher

**Location :** Commingled Water

**cc1 :** Charlie Harrison

**Sample Point :** wellhead

**cc2 :**

**Salesman :** Clay Bingham

**cc3 :**

**Comments :**

**Analyst :** Karen Hawkins Allen

## CATIONS

## ANIONS

**Calcium :** 10,200 mg/l  
**Magnesium :** 287 mg/l  
**Barium :** 0 mg/l  
**Strontium :** 0 mg/l  
**Iron :** 85.0 mg/l  
**Sodium :** 77478 mg/l

**Chloride :** 138,000 mg/l  
**Carbonate :** 0 mg/l  
**Bicarbonate :** 148 mg/l  
**Sulfate :** 280 mg/l

**pH (field) :** 6.20  
**Temperature :** 65 degrees F  
**Ionic Strength :** 3.90  
**Resistivity :** ohm/meters  
**Ammonia :** ppm

**Specific Gravity :** 1.2300 grams/ml  
**Total Dissolved Solids :** 226,458 ppm  
**CO2 In Water :** 97 mg/l  
**CO2 In Gas :** 0.03 mole %  
**H2S In Water :** 75.0 mg/l  
**Dissolved Oxygen :** ppm

### SI calculations based on Tomson-Olde parameters

**Calcite (CaCO3) SI :** -0.36  
**Calcite (CaCO3) SI @ 100 F :** -0.01  
**Calcite (CaCO3) SI @ 120 F :** 0.20  
**Calcite (CaCO3) SI @ 140 F :** 0.42  
**Calcite (CaCO3) SI @ 160 F :** 0.65  
**Gypsum (CaSO4) SI :** -0.62  
**Barite (BaSO4) SI :** N/A  
**Celestite (SrSO4) SI :** N/A

**Calcite PTB :** N/A  
**Calcite PTB @ 100 F :** N/A  
**Calcite PTB @ 120 F :** 17.0  
**Calcite PTB @ 140 F :** 32.1  
**Calcite PTB @ 160 F :** 43.9  
**Gypsum PTB :** N/A  
**Barite PTB :** N/A  
**Celestite PTB :** N/A

**Confidential**  
Champion Technologies, Inc.  
Vernal District Technical Services

# Proof of Publication

BEFORE THE DIVISION OF OIL, GAS AND MINING, DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH

\*\*\*  
NOTICE OF AGENCY ACTION  
CAUSE NO. UIC-208  
\*\*\*

IN THE MATTER OF THE APPLICATION OF AVIARA ENERGY CORP. FOR ADMINISTRATIVE APPROVAL AMENDING THE CLASS II INJECTION PERMIT OF THE KANE SPRINGS FEDERAL UNIT 16-1 WELL LOCATED IN SECTION 16, TOWNSHIP 25 SOUTH, RANGE 18 EAST, SALT LAKE, GRAND COUNTY, UTAH.

\*\*\*  
THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of Aviar Energy Corp. for administrative approval of the Kane Springs Federal Unit 16-1 well, located in Section 16, Township 25 South, Range 18 East, Grand County, Utah, for amendment of the Class II Injection Permit. The proceeding will be conducted in accordance with Utah Admin. R649-10, Administrative Procedures.

Selective zones in the Cutler Formation will be used for water injection. The maximum requested injection pressure and rate will be determined based on fracture gradient information submitted by Aviar Energy

STATE OF UTAH, )  
County of Grand, ) ss.

Samuel J. Taylor or Adrien F. Taylor, being first duly sworn according to law, deposes and says: That he/she is the co-publisher of The Times-Independent, a weekly newspaper of general circulation, published every Thursday at Moab, Grand County, State of Utah; that the notice

Notice of Agency Action

hereto attached, and which is made a part of this Affidavit of Publication, was published in said newspaper for a period of 1 consecutive issues, the first publication date having been made Feb. 8, 2001

;and the last on

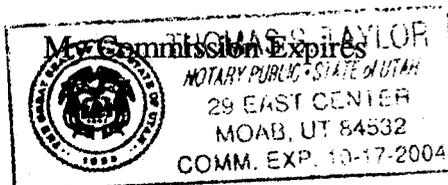
;and the said notice was published in each and every copy of said newspaper during the period and time of publication, and that it was published in the newspaper proper and not in a supplement thereof.

*Samuel J. Taylor*  
\_\_\_\_\_  
Co-Publisher

Subscribed and sworn before me this

*[Signature]*  
\_\_\_\_\_  
Notary Public

Residing at Moab, Utah



# Proof of Publication

BEFORE THE DIVISION OF OIL, GAS AND MINING, DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH

NOTICE OF AGENCY ACTION CAUSE NO. UIC-208

IN THE MATTER OF THE APPLICATION OF the proceeding, must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedural rules. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests. Dated this 31st day of JANUARY, 2001.

STATE OF UTAH DIVISION OF OIL, GAS & MINING /s/John R. Baza Associate Director Published in The Times-Independent, Moab, Utah, Feb. 8, 2001.

STATE OF UTAH, )
County of Grand, ) ss.

Samuel J. Taylor or Adrien F. Taylor, being first duly sworn according to law, deposes and says: That he/she is the co-publisher of The Times-Independent, a weekly newspaper of general circulation, published every Thursday at Moab, Grand County, State of Utah; that the notice

Notice of Agency Action

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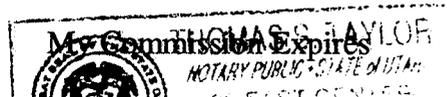
;and the last on

;and the said notice was published in each and every copy of said newspaper during the period and time of publication, and that it was published in the newspaper proper and not in a supplement thereof.

Signature of Samuel J. Taylor
Co-Publisher

Subscribed and sworn before me this

Signature of Notary Public
Notary Public
Residing at Moab, Utah



May 29, 2001

Division of Oil, Gas, and Mining  
Department of Natural Resources, State of Utah  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

Attention: Chris Kierst

Reference: Kane Springs Federal 16-1  
Section 16, T25S, R18E  
Grand County, Utah

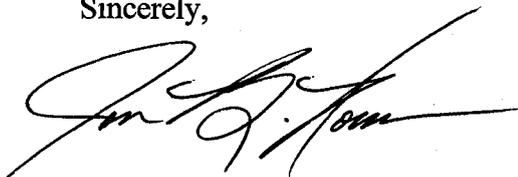
Dear Mr. Kierst,

Please find enclosed the White Rim Structure Map, which you requested. I went back and checked my log picks (sub sea in red), used Paradox Basin Data tops for some (sub sea in blue), and then hand contoured on a 100' contour interval. I still feel that the prevalent dip direction is north to northwest from our Kane Springs Federal 16-1.

I spoke with Mike Hunter, Canyonlands National Park, regarding the question of where they get their drinking water. He informed me that the Park drilled five exploratory water wells in the Island in the Sky area of the park, which encountered salt water with slight shows of oil and gas. All of the water that they use has to be trucked in from Arches National Park. He knows of no producing fresh water wells on the mesa in the area we are looking at. I have also attached copies of our water analysis reports, which I do not know if you have copies of. They should be attached to our permit application. The White Rim water that we swabbed back during our testing had a Chloride content of 33,200 mg/l. This supports the findings of the Canyonlands group, that the White Rim cannot be used as an aquifer because of its high Chloride content.

I am sorry that it has taken me this long to get this information back to you. I have been traveling on business. Let me know if you need anything else.

Sincerely,



Jon B. Norman  
Senior Geologist  
Aviara Energy Corp.

**RECEIVED**

JUN 07 2001

DIVISION OF  
OIL, GAS AND MINING



2080 SOUTH 1500 EAST  
VERNAL, UTAH 84078

Disposal Zone Sample

## Water Analysis Report

Telephone (435) 789-4327

**Customer :** Avlara Energy Corp.  
**Address :**  
**City :** Moab  
**State :** UT **Postal Code :**  
**Attention :** Mark Swisher  
**cc1 :** Charlie Harrison  
**cc2 :**  
**cc3 :**  
**Comments :**

**Date Sampled :** 21-Dec-00  
**Date Reported :** 08-Jan-01  
**Date Received :** 02-Jan-01  
**Field :** Kane Springs Unit  
**Lease :** Kane Springs Unit  
**Location :** WELL NO. # 16-1  
**Sample Point :** wellhead  
**Salesman :** Clay Bingham  
**Analyst :** Karen Hawkins Allen

### CATIONS

**Calcium :** 12,240 mg/l  
**Magnesium :** 488 mg/l  
**Barium :** 0 mg/l  
**Strontium :** 0 mg/l  
**Iron :** 56.0 mg/l  
**Sodium :** 7145 mg/l

### ANIONS

**Chloride :** 33,200 mg/l  
**Carbonate :** 0 mg/l  
**Bicarbonate :** 354 mg/l  
**Sulfate :** 923 mg/l

**pH (field) :** 6.30  
**Temperature :** 65 degrees F  
**Ionic Strength :** 0.98  
**Resistivity :** ohm/meters  
**Ammonia :** ppm

**Specific Gravity :** 1.0500 grams/ml  
**Total Dissolved Solids :** 54,404 ppm  
**CO2 in Water :** 44 mg/l  
**CO2 in Gas :** 0.03 mole %  
**H2S in Water :** 119.0 mg/l  
**Dissolved Oxygen :** ppm

### SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	0.20	Calcite PTB :	41.3
Calcite (CaCO3) SI @ 100 F :	0.58	Calcite PTB @ 100 F :	96.1
Calcite (CaCO3) SI @ 120 F :	0.77	Calcite PTB @ 120 F :	119.1
Calcite (CaCO3) SI @ 140 F :	0.99	Calcite PTB @ 140 F :	138.2
Calcite (CaCO3) SI @ 160 F :	1.21	Calcite PTB @ 160 F :	152.5
Gypsum (CaSO4) SI :	-0.04	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

**Confidential**  
Champion Technologies, Inc.  
Vernal District Technical Services



2080 SOUTH 1500 EAST  
VERNAL, UTAH 84078

Production Water

## Water Analysis Report

Telephone (435) 789-4327

**Customer :** Avlars Energy Corp.

**Date Sampled :** 21-Dec-00

**Address :**

**Date Reported :** 08-Jan-01

**City :** Moab

**Date Received :** 02-Jan-01

**State :** UT **Postal Code :**

**Field :** Kane Springs Unit

**Lease :** Kane Springs Unit

**Attention :** Mark Swisher

**Location :** Commingled Water

**cc1 :** Charlie Harrison

**Sample Point :** wellhead

**cc2 :**

**Salesman :** Clay Bingham

**cc3 :**

**Comments :**

**Analyst :** Karen Hawkins Allen

### CATIONS

**Calcium :** 10,200 mg/l  
**Magnesium :** 267 mg/l  
**Barium :** 0 mg/l  
**Strontium :** 0 mg/l  
**Iron :** 86.0 mg/l  
**Sodium :** 77478 mg/l

### ANIONS

**Chloride :** 138,000 mg/l  
**Carbonate :** 0 mg/l  
**Bicarbonate :** 148 mg/l  
**Sulfate :** 280 mg/l

**pH (field) :** 6.20  
**Temperature :** 65 degrees F  
**Ionic Strength :** 3.90  
**Resistivity :** ohm/meters  
**Ammonia :** ppm

**Specific Gravity :** 1.2300 grams/ml  
**Total Dissolved Solids :** 228,458 ppm  
**CO2 In Water :** 97 mg/l  
**CO2 In Gas :** 0.03 mole %  
**H2S In Water :** 75.0 mg/l  
**Dissolved Oxygen :** ppm

### SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.36	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.01	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.20	Calcite PTB @ 120 F :	17.0
Calcite (CaCO3) SI @ 140 F :	0.42	Calcite PTB @ 140 F :	32.1
Calcite (CaCO3) SI @ 160 F :	0.65	Calcite PTB @ 160 F :	43.9
Gypsum (CaSO4) SI :	-0.62	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

**Confidential**  
Champion Technologies, Inc.  
Vernal District Technical Services

Page 2 of 2



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Kathleen Clarke  
Executive Director

Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

June 29, 2001

Jon B. Norman  
Senior Geologist  
Aviara Energy Corporation  
PO Box 1350  
Houston, TX 77251-1350

Re: Disposal Zone change, Aviara Energy Corporation Kane Springs Unit #16-1  
SWD well, Section 16, Township 25 South, Range 18 East, Grand County, Utah.

Dear Mr. Norman:

The Division of Oil, Gas and Mining has considered the information presented in support of moving the Disposal Zone in the subject well from its present position in the Pennsylvanian Honaker Trail Formation. The interval proposed for injection in the UIC Form 1, Application for Injection Well, is the top of the White Rim Sandstone of the Cutler Group through perforations placed from 1,490 feet to 1,520 feet, Total Depth. The information presented on your structure contour map indicates that the well is on the north flank of the Kane Creek Anticline and the migration path of injectate would likely be primarily to the north with secondary dispersion occurring vertically and to the east and west.

Given the stratigraphy of this area, a proposal for injection into the uppermost Permian strata presupposes the confining layer to be the Triassic Moenkopi Formation since all other superjacent formations are completely or mostly compromised by exposure in the deep canyons north, south and west of the injection well. The Moenkopi Formation is about 295 feet thick in the injection well. About 90 feet (nearly 31%) of the Moenkopi Formation is exposed in the canyon of the Green River, about 3 miles west-southwest of the subject well. The axis of the westward plunging anticline is roughly east-west.

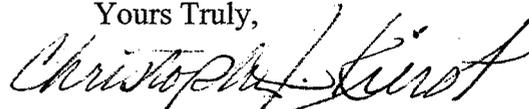
The existence of extensional normal faults along this anticline (and other salt flowage anticlines in this basin) is well documented in the literature. Extensional normal faults have been mapped on the north side of the Kane Creek Anticline in the Potash area. A significant mapped normal fault system, striking west-northwest, also is mapped about 3 miles to the west of the injection well, in the Bowknot Bend area of the Green River. This system could easily be construed as similar to what one would reasonably expect from a structural regime genetically related to that observed at Potash. In addition, the

Page Two  
Jon B. Norman  
June 29, 2001

more frequent of the 2 mapped prominent surface joint systems in the area between the injection well and the Bowknot Bend area also trends west-northwest. These features, while sparse in much of the Big Flat area, are evident in both the area west of the injection well and the Potash area where they are associated with the mapped extensional faults. It is reasonable to conclude that these fault/joint systems are likely to be genetically related.

While confinement of White Rim Sandstone formation water is seemingly demonstrated by natural conditions observed in the injection well, it is uncertain that it would continue under the added stresses of an injection operation. The Division is concerned that faulting/jointing may present a potential conduit for the anisotropic diversion of injectate towards the Green River, potentially contaminating that watercourse. We also feel that, as the sole confining layer, the partially compromised Moenkopi Formation presents a meager safeguard for the containment of the injectate. These issues should be technically addressed prior to approval of the requested change and we welcome any information Aviara should produce to dispel our concerns.

Yours Truly,



Christopher J. Kierst  
Reclamation Specialist III

cc: Gil L. Hunt  
John R. Baza

**From:** Chris Kierst  
**To:** jnorman@aviaraenergy.com  
**Subject:** Kane Springs Unit #16-1 SWD well

I have started to analyze your application to amend the injection zone in this well. From the outset it appears that the very terrain surrounding your location is conspiring against you. You have about 2,500' of stratigraphy above the current Pennsylvanian age injection zone to work with, that was below the level of the surrounding canyon floors, which are generally floored with Triassic age Moenkopi Formation. Your injection location is essentially situated on a prominence bounded on three sides by deep canyons, one of which contains a major regional water course. The elevation at the river is about 3,950'. The elevation at the floor of the nearest adjacent canyon (Hell Roaring - about 1.4 miles distant) is about 4,400' and the elevation at the location is 5,142'. In the injection well, the top of the Cutler Formation, the proposed injection zone, is 3,692' and the top of the perfs is 18' deeper at 3,674'. There is very little Cutler above your injection zone. A large part of the apparent vertical distance (726') between the floor of the canyon and the top of the injection zone is attributable to dip on the flank of the anticline. At the river, the canyon may be floored with Cutler or it is very close at hand below the river sediments, with a thin remnant of intervening Moenkopi. While a confining layer is not designated, it is obvious that the Moenkopi Formation is about as good as confinement gets. In this area the Moenkopi isn't really very thick and part of its thickness is sacrificed to the vagaries of the fluvial basal sandstones of the Chinle, which were mined for uranium in the nearby canyons. The confining integrity of the Moenkopi is further degraded by dint of providing an incomplete section because of exposure and incision by the canyons. I am concerned that you folks are cutting things a bit too thin. Can you assuage my fears?

5164  
1181  
4083

**AVIARA**  
**ENERGY CORPORATION**

One Riverway, Suite 700  
Houston, Texas 77056

Christopher J. Kierst  
Reclamation Specialist III  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas, and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

July 5, 2001

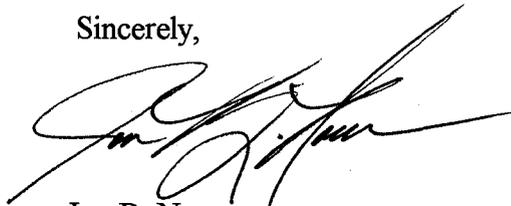
**Re: Disposal Zone change, Aviara Energy Corporation Kane Springs Unit #16-1  
SWD well, Section 16, Township 25 South, Range 18 East, Grand County, Utah**

Dear Mr. Kierst:

We have received your letter dated June 29, 2001 regarding the above referenced SWD zone change. If possible, could you please supply us with the literature or data that you are referencing regarding the faulting and surface joint systems in and around our #16-1 well bore.

Later this month, we plan to run a pressure draw down test on the #16-1 proposed White Rim Sandstone disposal zone. From this data we will be able to calculate permeability, which will allow us to calculate the pressure away from the well bore. When this is completed, we will supply you this data along with the results.

Sincerely,



Jon B. Norman

Cc: Mark Swisher  
Donny Worthington

**RECEIVED**

JUL 11 2001

DIVISION OF  
OIL, GAS AND MINING

*NORMAN*

AVIARA ENERGY CORPORATION  
ONE RIVERWAY, P. O. BOX 1350  
HOUSTON, TEXAS 77251-1350



*Christopher Kieast  
State of Utah  
Department of Natural Resources  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah  
84114-5801*

24116+3154





State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
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Kathleen Clarke  
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PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

July 13, 2001

Jon B. Norman  
Senior Geologist  
Aviara Energy Corporation  
PO Box 1350  
Houston, TX 77251-1350

Re: Disposal Zone change, Aviara Energy Corporation Kane Springs Unit #16-1  
SWD well, Section 16, Township 25 South, Range 18 East, Grand County, Utah.

Dear Mr. Norman:

Enclosed please find copies of parts of several maps, including coversheets documenting their authority, and the relevant reports, as you requested, which were used during the technical review of the geological characteristics of the injection zone, superjacent strata and structural geology in the area of the subject disposal well.

This Division's interest lies in facilitating the workmanlike development of your project. Please feel free to inform me if you have additional information bearing on this matter and contact me if I may be of additional assistance.

Yours Truly,

A handwritten signature in cursive script that reads "Christopher J. Kierst".

Christopher J. Kierst  
Reclamation Specialist III

er

cc: John R. Baza  
Gil L. Hunt

Christopher Kierst  
State of Utah, DNR  
DOGM  
PO Box 145801  
Salt Lake City, UT 84114-5801

October 5, 2001

Re: Kane Springs Unit #16-1 SWD, Sect. 16, T25S, R18E, Grand County, Utah

Dear Christopher,

I apologize for the delay in getting this test data to you, we had problems with our computer modem that we tried to fix, but eventually had to down load the data and mail in to our office to load again and evaluate.

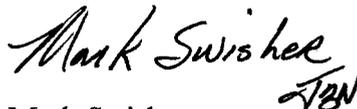
The test data shows that this well has an injection profile that is radial in nature, and not fractured. Attached are type curves for radial and fractured reservoirs. When our test data is plotted, it can be seen that the data best fits a radial system. Even though there is a disruption in some of the middle time data, the early time and late time fit the radial type curve having a skin of about 5 and a permeability of 900-1000 md. The disruption is probably from part of the sand having a higher perm, or some type of temperature affect from testing over-night. The general shape of the data is typical of a radial flow regime.

I included the type curves for vertical fractures to show that the test data does not fit at any part of the test. The perm of this type system would also be much lower (266 md vs. 944 md) to fit our data, which is not supported by our high injectivity tests in this zone. This evidence shows that our well is not injecting into a fracture system down hole, and since the well takes water on vacuum, the pressure will not exist to fracture any surrounding barriers.

Also included is the raw data from our echometer test.

I appreciate your help in this matter, and apologize again for my delay.

Sincerely,

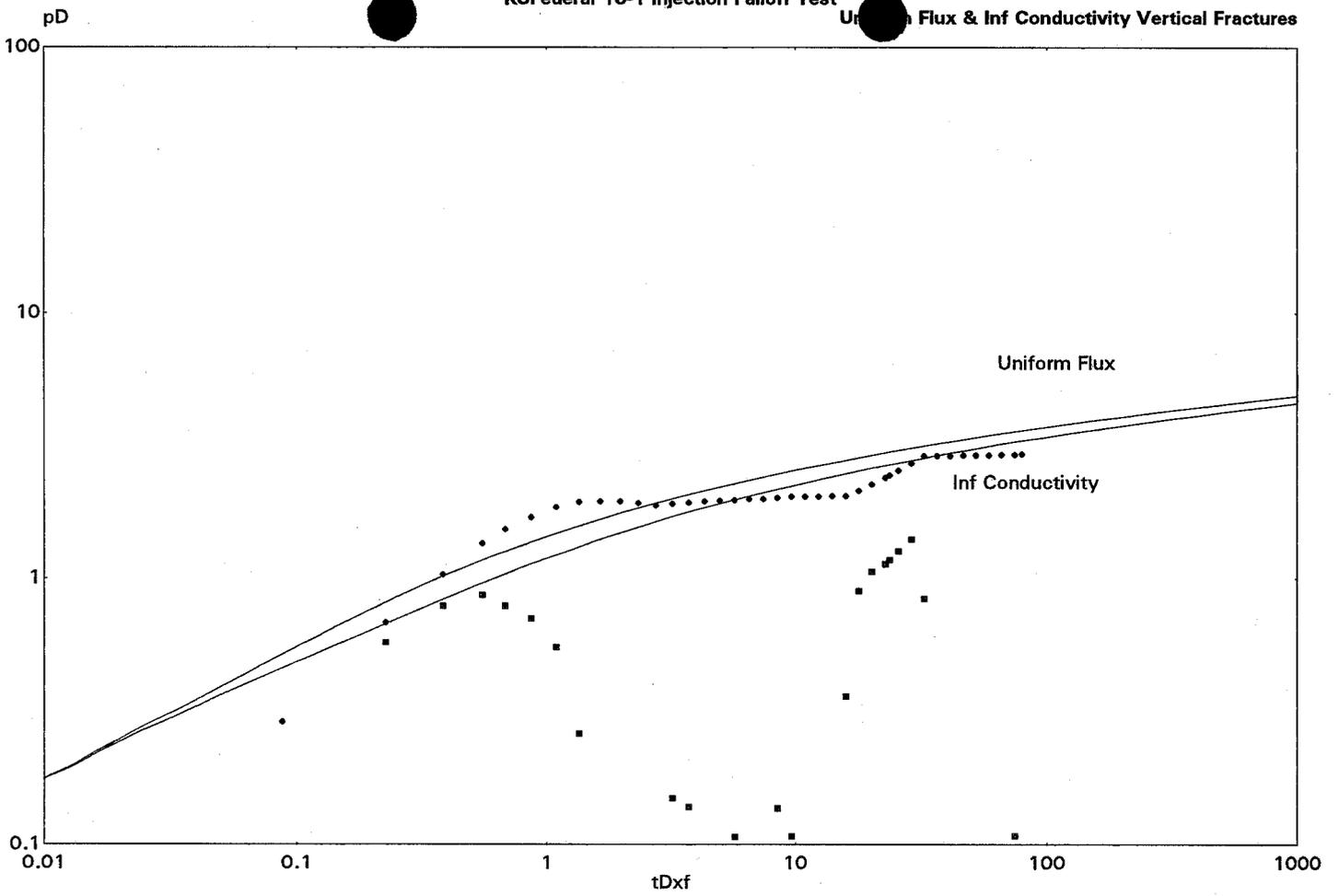


Mark Swisher  
District Superintendent  
Aviara Energy Corp.

**RECEIVED**

OCT 15 2001

DIVISION OF  
OIL, GAS AND MINING



KSFederal 16-1 Injection Falloff Test

Analysis Results: Uniform Flux & Inf Conductivity Vertical Fractures

Dimensionless Parameters:

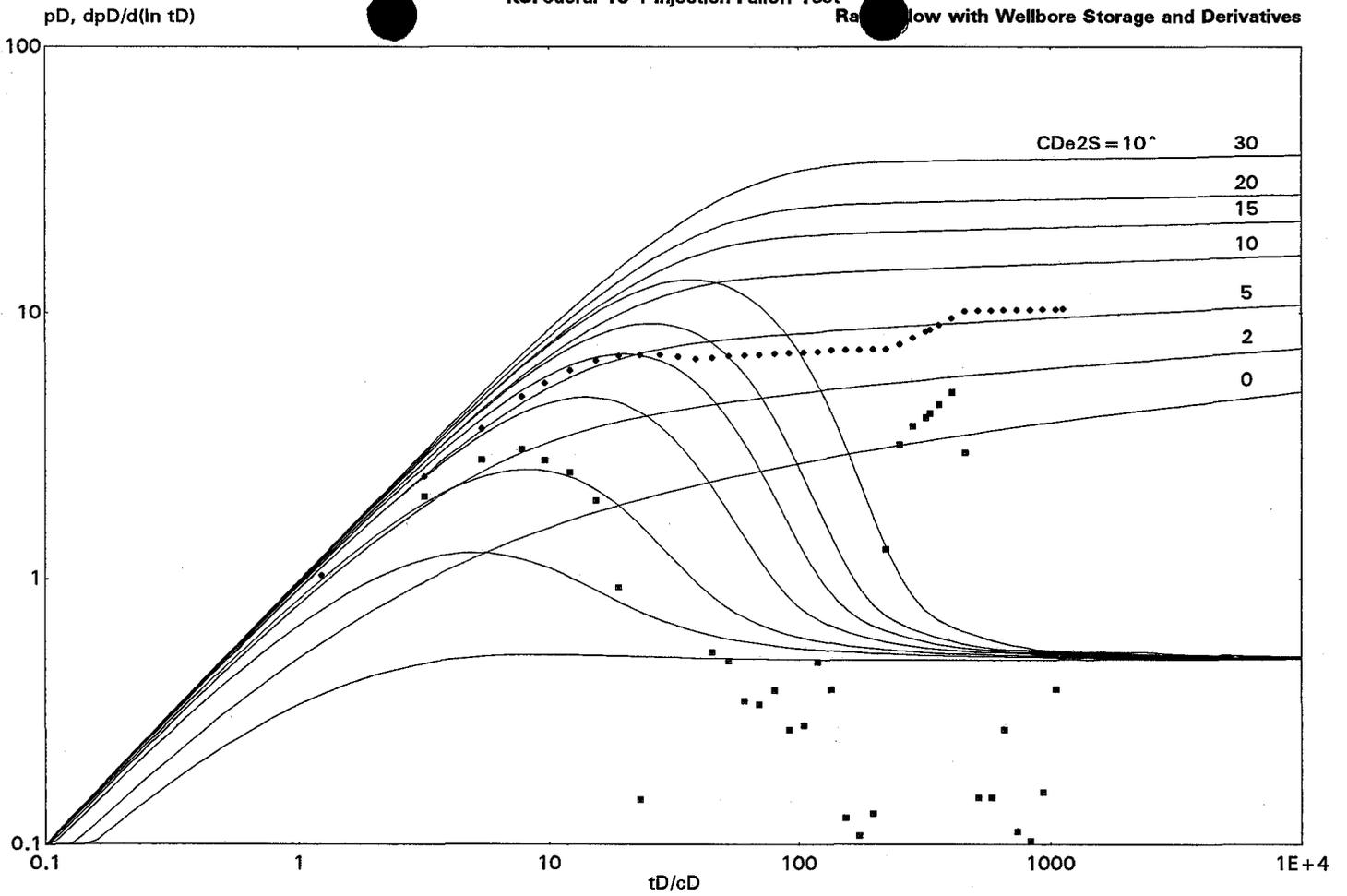
$tD/CD$  1hr: = 3.76117

$pD$  1 psi = 0.028683

Calculated Values:

$k$  = 266.4 md

$kh$  = 7992.3 md-ft



KSFederal 16-1 Injection Falloff Test

Analysis Results: Radial Flow with Wellbore Storage and Derivatives

Dimensionless Parameters:

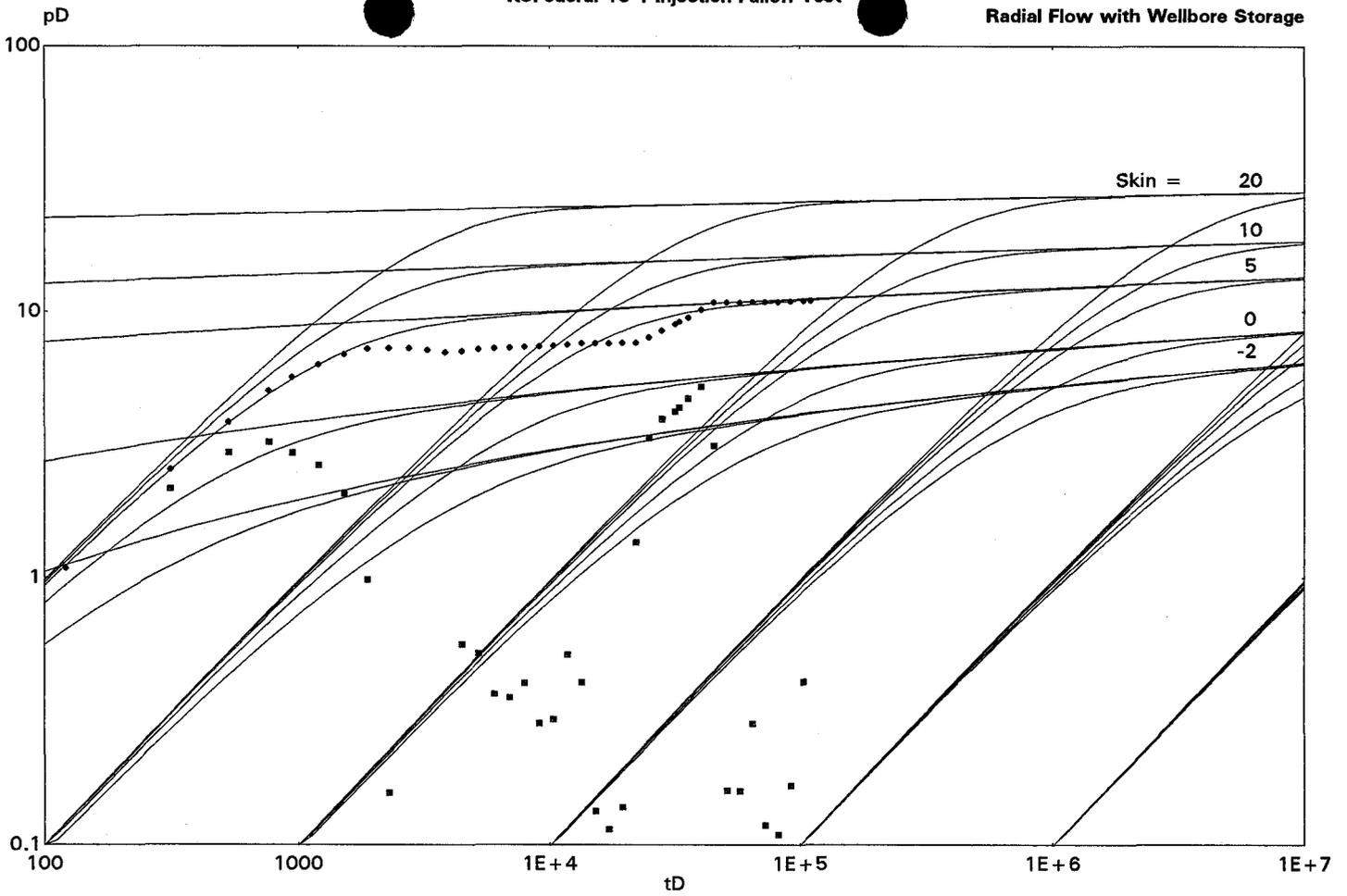
$tD/CD$  1hr: = 52.8914

$pD$  1 psi = 0.10159

Calculated Values:

$k$  = 943.5 md

$kh$  = 28306 md-ft



KSFederal 16-1 Injection Falloff Test

Analysis Results: Radial Flow with Wellbore Storage

Dimensionless Parameters:

$tD/CD$  1hr: = 5223.84

pD 1 psi = 0.10756

Calculated Values:

$k$  = 999.0 md

$kh$  = 29971 md-ft

# Kane Springs Federal Unit #16-1 SWD Injection Falloff Test

Minutes	Pressure	Fluid Level
16.6	-8.7	718.5903
18	-8.7	738.5225
20.2	-8.6	765.8308
22.7	-8.6	789.6747
25.4	-8.7	811.6155
27.5	-8.7	823.563
30.4	-8.75	835.024
34.1	-8.74	845.9775
38.2	-8.68	851.5486
42.9	-8.67	852.7842
48.2	-8.64	852.5231
54	-8.59	850.8326
60.6	-8.63	848.106
68	-8.54	849.7755
76.3	-8.52	851.4449
85.7	-8.51	852.5579
96.1	-8.34	853.671
107.9	-8.31	854.784
121	-8.21	855.897
135.8	-8.13	856.4535
152.4	-8.12	857.5665
171	-8.24	858.6794
191.9	-8.17	859.236
215.3	-7.97	859.7925
241.6	-7.88	860.349
271	-7.71	860.9055
304.1	-7.7	867.5419
341.3	-7.71	876.1317
382.9	-7.72	885.0541
397.5	-7.67	887.987
429.6	-7.64	895.0125
482.1	-7.65	906.1497
540.9	-7.64	917.977
606.9	-7.62	918.5684
681	-7.66	918.5684
764.1	-7.7	919.1599
857.3	-7.67	919.7513
961.9	-7.62	919.7513
1079.3	-7.65	920.3429
1211	-7.64	920.3429
1292.8	-7.46	921.5258

**AVIARA**  
**ENERGY CORPORATION**

One Riverway, Suite 700  
Houston, Texas 77056

Via Federal Express

November 6, 2001

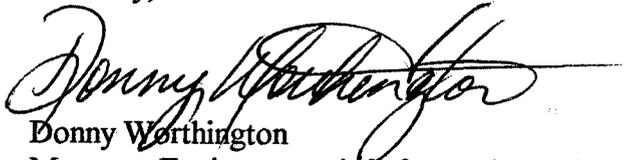
Mr. Chris Kierst  
State of Utah - Division of Oil, Gas and Mining  
1594 West North Temple, Ste 1210  
Salt Lake City, Utah 84114-5801

**Re: Adjacent Landowner Notification  
Saltwater Injection Zone Change  
Aviara Energy Corporation  
Kane Springs Federal Unit #16-1 SWD  
Section 16, T25S, R18E  
Grand County, Utah**

Dear Mr. Kierst;

Pursuant to the provisions and the requirements of the Utah Administrative Code (R649-5-2.12), Aviara must notify adjacent landowners on the proposal referenced above. Only Bureau of Land Management lands are adjacent to Section 16, and I have attached a copy of the letter notify them of the proposed action. Should you need further information, please feel free to contact me, Mark Swisher or Jon Norman at (713) 871-3400.

Sincerely,

  
Donny Worthington  
Manager, Environmental, Safety and Regulatory Affairs

**RECEIVED**

NOV 07 2001

DIVISION OF  
OIL, GAS AND MINING

**AVIARA**  
ENERGY CORPORATION

One Riverway, Suite 700  
Houston, Texas 77056

Via Certified Mail

October 24, 2001

COPY

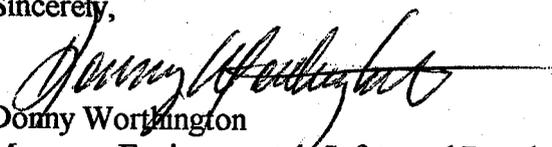
Ms. Maggie Wyatt  
Manager, Moab Field Office  
Bureau of Land Management  
82 East Dogwood  
Moab, UT 84532

**Re: Saltwater Injection Zone Change  
Aviara Energy Corporation  
Kane Springs Federal Unit #16-1 SWD  
Section 16, T25S, R18E  
Grand County, Utah**

Dear Ms. Wyatt;

A permit and exhibits have been submitted the State of Utah, Division of Oil, Gas and Mining to change the injection zone in the Kane Springs Federal Unit #16-1 SWD Well. Pursuant to the provisions and the requirements of the Utah Administrative Code (R649-5-2.12), Aviara must notify adjacent landowners of our proposal. Please be advised that this letter serves as such notice.

Sincerely,

  
Donny Worthington  
Manager, Environmental, Safety and Regulatory Affairs

UNITED STATES POSTAL SERVICE  
OFFICIAL BUSINESS



ALWAYS  
USE  
ZIP CODE



PENALTY FOR PRIVATE USE, \$300

**SENDER INSTRUCTIONS**  
Print your name, address and ZIP Code in the space below.  
• Complete items 1, 2, 3, and 4 on the reverse.  
• Attach to front of article if space permits, otherwise affix to back of article.  
• Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

Print Sender's name, address, and ZIP Code in the space below.

— Aviara Energy Corporation  
— P. O. Box 1350  
— Houston, TX 77251-1350

*Handwritten signature and address*

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. (Extra charge)  
2.  Restricted Delivery (Extra charge)

<p>3. Article Addressed to:</p> <p><i>Ms. Maggie Wyatt MOAD Office BLM 82 E Dogwood MORO, UT 84532</i></p>	<p>4. Article Number <i>P 091-713-395</i></p> <p>Type of Service:</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise</p> <p>Always obtain signature of addressee or agent and <u>DATE DELIVERED</u>.</p>
<p>5. Signature - Address <i>X [Signature]</i></p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>6. Signature - Agent <i>X [Signature]</i></p>	
<p>7. Date of Delivery <i>10/30/01</i></p>	

PS Form 3811, Mar. 1988 \* U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

To: Carol Daniels  
Fax #: (801) 359-3940  
Phone#: (801) 538-5284  
Re: Subsequent Sundry Notice  
Kane Springs Federal #16-1

AVIARA  
ENERGY  
FACSIMILE

January 31, 2002

5 Pages including this cover sheet

Ms. Daniels,

As per our conversation of this morning, here is a fax copy of the above referenced report. I will be sending a hard copy in the mail today.

Thanks you for your assistance in this matter.

*Victoria Guidry*

From the desk of...  
Victoria Guidry  
Production/Regulatory Coordinator  
Aviara Energy Corporation  
P. O. Box 1350  
Houston, TX 77251-1350

(713) 871-3444  
Fax: (713) 871-3478

**RECEIVED**

JAN 31 2002

DIVISION OF  
OIL, GAS AND MINING

□

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**ML-44333**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
**NA**

7. UNITY or CA AGREEMENT NAME:  
**formerly Kane Springs Fed. Unit**

8. WELL NAME and NUMBER:  
**Kane Springs Fed Unit 16-1 SWD**

9. API NUMBER:  
**4301931341**

10. FIELD AND POOL, OR WILDCAT:  
**Wildcat**

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL  GAS WELL  OTHER SWD

2. NAME OF OPERATOR:  
**Aviara Energy Corporation**

3. ADDRESS OF OPERATOR:  
**P. O. Box 1350** CITY **Houston** STATE **TX** ZIP **77251-1350** PHONE NUMBER: **(713) 871-3400**

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: **960 FS, 1960 FW** COUNTY: **Grand**  
QTRQTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: **SESW 16 25S 18E** STATE: **UTAH**

**CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <b>12/14/2001</b>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input checked="" type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: <u>Change Zones</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

See the attached Summary of Operations Performed

NAME (PLEASE PRINT) Victoria Guidry TITLE Production/Regulatory Coordinator

SIGNATURE *Victoria Guidry* DATE 1/12/2004

(This space for State use only)

**AVIARA ENERGY CORPORATION  
REPORT OF DRILLING IN PROGRESS  
January 11, 2001**

**OPERATED**

**RECOMPLETION**

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1900' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

REPORT DATE : 12/8/00	MD : 0	TVD : 0	DOL : 0	DSS : 0	PROGRESS : 0	HRS :
DAILY COST : \$9,040		CUM COST : \$9,040			MW :	VISC :

DAILY DETAILS : RU KEY, ND WELLHEAD, NU BOPS. ATT TO UNSEAT PKR & TOH W/ TBG. STAND BACK 26 STDs, LD 41 JTS TBG. TBG BACKED OFF, LEFT ABOUT 20 JTS & 3-1/2 X 10-3/4" D&L SL NON-SHEAR PKR SET @ 3605'. 2-7/8" COLLAR LOOKING UP. RU RMWL, RIH & PERF 1642-46' W/ 4 SPF. PUMP 225 BBLs DOWN 10-3/4" CSG TO GET BLOW UP 13-3/8" X 10-3/4" ANNULUS. SDFN.

REPORT DATE : 12/9/00	MD : 0	TVD : 0	DOL : 1	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$15,270		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : PU BAKER 10-3/4" CMT RTNR & TIH W/ TBG. SET RTNR @ 1611'. FILL ANN W/ 60 BBLs & TEST 10-3/4" CSG & RTNR TO 1500# - HELD OK. BLED TO 300#. RU HALLIBURTON, BRK CIRC - PIR 3.5 BPM, 200# TP, TAKING RETURNS UP 13-3/8" X 10-3/4" ANNULUS. M&P 300 SXS 50/50 POZ W/ 2% GEL & 3% SALT, 1.1B YLD, 14.5 PPG. DISPLACE CMT W/ 10.8 BBLs FW - BELOW RTNR. SD PUMP & STING OUT OF RTNR. BLED BACK 475# TP & RD HALLIBURTON. TOH W/ TBG & SETTING TOOL SDFN.

REPORT DATE : 12/10/00	MD : 0	TVD : 0	DOL : 2	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$0		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

REPORT DATE : 12/11/00	MD : 0	TVD : 0	DOL : 3	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$0		CUM COST : \$24,310			MW :	VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

REPORT DATE : 12/12/00	MD : 0	TVD : 0	DOL : 4	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$7,367		CUM COST : \$31,677			MW :	VISC :

DAILY DETAILS : RU RMWL & RUN CBL, CMT GOOD. RIH & PERF 1505-20' W/ 4 SPF. MAKE 2ND RUN & PERF 1490-1505'. RD RMWL. PU SN & TIH W/ 2-7/8" TBG TO BTM. SDFN.

REPORT DATE : 12/13/00	MD : 0	TVD : 0	DOL : 5	DSS :	PROGRESS : 0	HRS :
DAILY COST : \$3,096		CUM COST : \$34,773			MW :	VISC :

DAILY DETAILS : SWAB ON WELL 7 HRS. FLUID LEVEL STABILIZED @ 1200'. RECOVERED 150 BBLs TOTAL, 30 BBLs FORMATION WATER @ 8.6 PPG. CAUGHT SAMPLE FOR ANALYSIS, TOH W/ TBG. SDFN.

**AVIARA ENERGY CORPORATION  
REPORT OF DRILLING IN PROGRESS  
January 12, 2001**

**OPERATED**

**RECOMPLETION**

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

<b>FIELD :</b> KANE SPRINGS FIELD	<b>WI% :</b> 45.54000
<b>COUNTY :</b> GRAND	<b>AFE# :</b> 01255
<b>STATE :</b> UTAH	<b>DHC :</b>
<b>LOCATION :</b> 960' FSL & 1960' FWL; SE/4 OF SW/4	<b>CWC :</b> \$67,100
<b>PLANNED DEPTH MD:</b> TVD:	<b>AFE TOTAL :</b> \$67,100
<b>CONTRACTOR :</b> KEY	<b>SPUD DATE :</b>
<b>OBJECTIVE :</b> CUTLER FORMATION	<b>AP# :</b>

<b>REPORT DATE :</b> 12/14/00	<b>MD :</b> 0	<b>TVD :</b> 0	<b>DOL :</b> 8	<b>DSS :</b>	<b>PROGRESS :</b> 0	<b>HRS :</b>
<b>DAILY COST :</b> \$9,208		<b>CUM COST :</b> \$43,983			<b>MW :</b>	<b>VISC :</b>

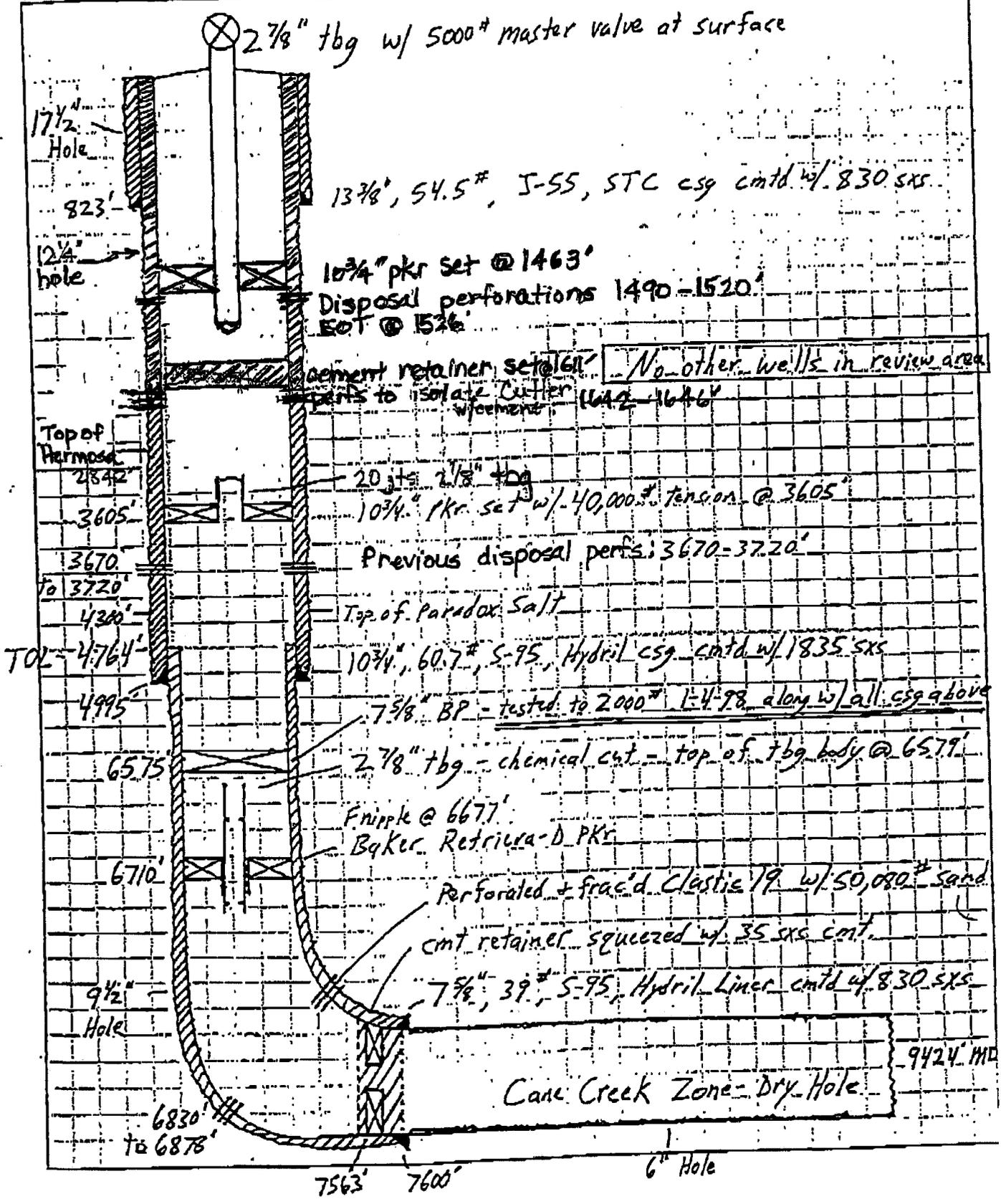
**DAILY DETAILS :** PU 2 JTS 2-7/8" TBG, 10-3/4" TYPE "H" TENSION PKR & TIH W/ 46 JTS 2-7/8" TBG. SET PKR @ 1463' W/ EOT @ 1526'. ND BOPS, TOOK 142M# PULL TO SET SLIPS, LEFT 20M# TENSION ON PKR. NU TREE & FILL TBG W/ 5 BBLS LSW. PUMP INTO ZONE @ APPROX 1/8 BPM @ 100#. INCREASED TO APPROX 1/4 BPM @ 200# & APPROX 1/2 BPM @ 300#. CHG GEARS & PUMP APPROX 2 BPM @ 400# & APPROX 2-1/2 BPM @ 400#. SD, WELL ON VACUUM. RDMO.  
\*\*\*\*\* FINAL REPORT \*\*\*\*\*

SUBJECT Kane Springs Federal Unit #16-1

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CURRENT  
Wellbore diagram

AFE NO. \_\_\_\_\_  
BY MDS DATE 12-14-00



**AVIARA**  
**ENERGY CORPORATION**

One Riverway, Suite 700  
Houston, Texas 77056

January 31, 2002

Ms. Carol Daniels  
State of Utah  
Division of Oil, Gas, & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

Reference: Kane Springs Unit 16-1  
Sec. 16 T25S R18E  
Grand County, Utah

Dear Ms. Daniels:

Enclosed please find four copies of Form 9, "Sundry Notices and Reports on Wells" for the above referenced water disposal well. As per your request these copies are in addition to the facsimile that was sent to your attention this morning.

Apparently the original document, which was sent to the Division of Oil, Gas, & Mining on January 12, 2001, was never received or did not make it into the file.

Please contact me at 713-871-3444 should you have any questions or require additional information. Thank you for your assistance.

Very truly yours,

AVIARA ENERGY CORPORATION



Victoria Guidry  
Production/Regulatory Coordinator

/v/jg

Enclosure

H:\...reg\ks161a

**RECEIVED**

FEB 07 2002

DIVISION OF  
OIL, GAS AND MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-44333
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>SWD</u>		7. UNIT or CA AGREEMENT NAME: formerly Kane Springs Fed. Unit
2. NAME OF OPERATOR: Aviara Energy Corporation		8. WELL NAME and NUMBER: Kane Springs Fed Unit 16-1 SWD
3. ADDRESS OF OPERATOR: P. O. Box 1350      CITY Houston      STATE TX      ZIP 77251-1350		9. API NUMBER: 4301931341
4. LOCATION OF WELL FOOTAGES AT SURFACE: <u>960' FSL &amp; 1960' FWL</u>		10. FIELD AND POOL, OR WILDCAT: Wildcat
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <u>SESW 16 25S 18E</u>		COUNTY: <u>Grand</u>
		STATE: <u>UTAH</u>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <u>12/14/2000</u>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input checked="" type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: <u>Change Zones</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

See the attached Summary of Operations Performed

**RECEIVED**  
FEB 07 2002  
DIVISION OF  
OIL, GAS AND MINING

NAME (PLEASE PRINT) <u>Victoria Guidry</u>	TITLE <u>Production/Regulatory Coordinator</u>
SIGNATURE <u><i>Victoria Guidry</i></u>	DATE <u>1/12/2001</u>

(This space for State use only)

# AVIARA ENERGY CORPORATION REPORT OF DRILLING IN PROGRESS

January 11, 2001

## OPERATED

### RECOMPLETION

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

**REPORT DATE : 12/8/00** MD : 0 TVD : 0 DOL : 0 DSS : 0 PROGRESS : 0 HRS :  
DAILY COST : \$9,040 CUM COST : \$9,040 MW : VISC :

DAILY DETAILS : RU KEY, ND WELLHEAD, NU BOPS. ATT TO UNSEAT PKR & TOH W/ TBG. STAND BACK 26 STDS, LD 41 JTS TBG. TBG BACKED OFF, LEFT ABOUT 20 JTS & 3-1/2 X 10-3/4" D&L SL NON-SHEAR PKR SET @ 3605'. 2-7/8" COLLAR LOOKING UP. RU RMWL, RIH & PERF 1642-46' W/ 4 SPF. PUMP 225 BBLs DOWN 10-3/4" CSG TO GET BLOW UP 13-3/8" X 10-3/4" ANNULUS. SDFN.

**REPORT DATE : 12/9/00** MD : 0 TVD : 0 DOL : 1 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$15,270 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : PU BAKER 10-3/4" CMT RTNR & TIH W/ TBG. SET RTNR @ 1611'. FILL ANN W/ 60 BBLs & TEST 10-3/4" CSG & RTNR TO 1500# - HELD OK. BLED TO 300#. RU HALLIBURTON, BRK CIRC - PIR 3.5 BPM, 200# TP, TAKING RETURNS UP 13-3/8" X 10-3/4" ANNULUS. M&P 300 SXS 50/50 POZ W/ 2% GEL & 3% SALT, 1.18 YLD, 14.5 PPG. DISPLACE CMT W/ 10.8 BBLs FW - BELOW RTNR. SD PUMP & STING OUT OF RTNR. BLED BACK 475# TP & RD HALLIBURTON. TOH W/ TBG & SETTING TOOL. SDFN.

**REPORT DATE : 12/10/00** MD : 0 TVD : 0 DOL : 2 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$0 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

**REPORT DATE : 12/11/00** MD : 0 TVD : 0 DOL : 3 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$0 CUM COST : \$24,310 MW : VISC :

DAILY DETAILS : SHUT DOWN. NO WORK PERFORMED.

**REPORT DATE : 12/12/00** MD : 0 TVD : 0 DOL : 4 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$7,367 CUM COST : \$31,677 MW : VISC :

DAILY DETAILS : RU RMWL & RUN CBL, CMT GOOD. RIH & PERF 1505-20' W/ 4 SPF. MAKE 2ND RUN & PERF 1490-1505'. RD RMWL. PU SN & TIH W/ 2-7/8" TBG TO BTM. SDFN.

**REPORT DATE : 12/13/00** MD : 0 TVD : 0 DOL : 5 DSS : PROGRESS : 0 HRS :  
DAILY COST : \$3,098 CUM COST : \$34,775 MW : VISC :

DAILY DETAILS : SWAB ON WELL 7 HRS. FLUID LEVEL STABILIZED @ 1200'. RECOVERED 150 BBLs TOTAL, 30 BBLs FORMATION WATER @ 8.6 PPG. CAUGHT SAMPLE FOR ANALYSIS, TOH W/ TBG. SDFN.

# AVIARA ENERGY CORPORATION REPORT OF DRILLING IN PROGRESS

January 12, 2001

## OPERATED

### RECOMPLETION

**WELL NAME : KANE SPRINGS FEDERAL 16-1 SWD**

**OPERATOR : AVIARA ENERGY CORPORATION**

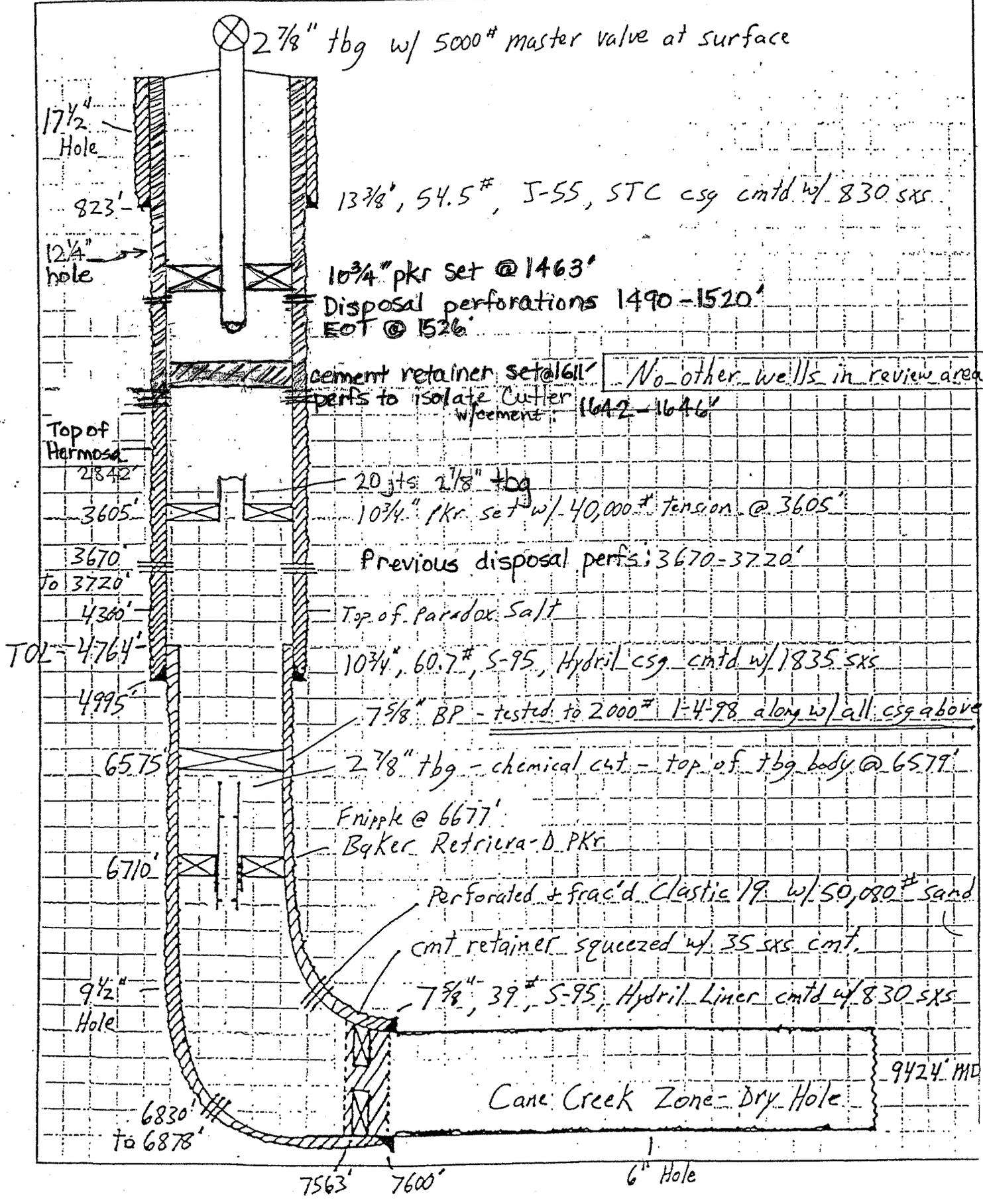
FIELD : KANE SPRINGS FIELD	WI% : 45.64000
COUNTY : GRAND	AFE# : 01255
STATE : UTAH	DHC :
LOCATION : 960' FSL & 1960' FWL; SE/4 OF SW/4	CWC : \$67,100
PLANNED DEPTH MD: TVD :	AFE TOTAL : \$67,100
CONTRACTOR : KEY	SPUD DATE :
OBJECTIVE : CUTLER FORMATION	API# :

<b>REPORT DATE : 12/14/00</b>	MD : 0	TVD : 0	DOL : 6	DSS :	PROGRESS: 0	HRS:
DAILY COST : \$9,208		CUM COST : \$43,983			MW :	VISC :

DAILY DETAILS : PU 2 JTS 2-7/8" TBG, 10-3/4" TYPE "H" TENSION PKR & TIH W/ 46 JTS 2-7/8" TBG. SET PKR @ 1463' W/ EOT @ 1526'. ND BOPS, TOOK 142M# PULL TO SET SLIPS, LEFT 20M# TENSION ON PKR. NU TREE & FILL TBG W/ 5 BBLs LSW. PUMP INTO ZONE @ APPROX 1/8 BPM @ 100#. INCREASED TO APPROX 1/4 BPM @ 200# & APPROX 1/2 BPM @ 300#. CHG GEARS & PUMP APPROX 2 BPM @ 400# & APPROX 2-1/2 BPM @ 400#. SD, WELL ON VACUUM. RDMO.

\*\*\*\*\* FINAL REPORT \*\*\*\*\*

CURRENT Wellbore diagram



**AFFIDAVIT**

STATE OF UTAH                    )  
  :SS  
COUNTY OF SALT LAKE        )

Sally M. Sullivan, being duly sworn upon her oath, deposes and states:

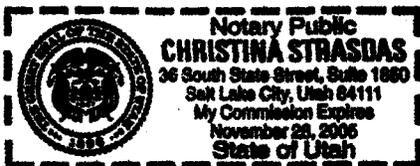
1. I am the Vice President of GeoScout Land & Title Company ("GeoScout").
2. "GeoScout" is a company that specializes in mineral abstracts and real estate and mineral title searches. I have over twelve years experience in searching the mineral records of the Bureau of Land Management ("BLM") and Utah counties relating to oil, gas and other mineral title.
3. My review of the following records:
  - a) Grand County Records as indexed in the abstract (tract) indices;
  - b) Federal Land Office records, Bureau of Land Management (including Oil & Gas case files, Serial Register Pages and Township Plats);
  - c) State of Utah, School & Institutional Trust Lands Administration (including Oil, Gas & Hydrocarbons case files, Serial Register Pages and Township Plats);
 for the S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$  of Section 16, the E $\frac{1}{2}$ E $\frac{1}{2}$  of Section 17, the NE $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 20, and the N $\frac{1}{2}$  of Section 21, Township 25 South, Range 18 East, SLM, I have determined the parties listed on Exhibit "B", which includes the "owners", "operators" and/or "surface owners" of the said lands (as those terms are utilized in Utah Admin. Code Rule R649-5-1) within the  $\frac{1}{2}$  mile of the proposed Kane Springs 16-1 water disposal well, on January 28, 2002.
4. The matters stated herein are true of my own knowledge.

Dated this 26<sup>th</sup> day of February 2002.

*Sally M. Sullivan*  
SALLY M. SULLIVAN

Subscribed, sworn and acknowledged to and by Sally M. Sullivan before me this 26<sup>th</sup> day of February, 2002

*Christina Strasdas*  
NOTARY PUBLIC



**Exhibit "B"**  
**Page 1 of 1**  
**Aviara Energy Corporation**  
**SESW of Section 16**  
**Township 25 South, Range 18 East, SLM**  
**Grand County, Utah**  
**Operators, Owners, Surface Owners within a ½ mile radius**

State of Utah  
School & Institutional Trust Lands Administration  
675 East 500 South  
Suite 500  
Salt Lake City, Utah 84102

**CERTIFIED MAIL**  
**POSTMARKED:**  
2/28/2002  
70000520 0023 5526 4982

Bureau of Land Management  
Moab District Office  
Division of Resource Management  
82 East Dogwood  
Moab, Utah 84532

**CERTIFIED MAIL**  
**POSTMARKED:**  
2/28/2002  
7000 0520 0023 5526 4920

Bureau of Land Management  
Utah State Office  
Division of Natural Resources  
PO Box 45155  
Salt Lake City, Utah 84145-0155

**CERTIFIED MAIL**  
**POSTMARKED:**  
2/28/2002  
70000520 0023 5526 4944

Aviara Energy Corporation  
Robert M. Donahue, Jr.  
1601 Elm Street, Suite 3400  
Dallas, Texas 75201

**NOT APPLICABLE;**  
**AVIARA ORIGINATED**  
**NOTICES TO OTHER**  
**PARTIES**

El Paso Production Oil & Gas USA, L.P.  
Nine Greenway Plaza  
Houston, Texas 77046-0995

**CERTIFIED MAIL**  
**POSTMARKED:**  
2/28/2002  
7000 0520 0023 5526 4951

Intrepid Oil & Gas LLC  
700 Seventeenth Street, #1700  
Denver, Colorado 80202

**CERTIFIED MAIL**  
**POSTMARKED:**  
2/28/2002  
7000 0520 0023 5526 4937



## Water Analysis, Scaling Tendency, and Compatibility Evaluation

Company: Aviana Energy Corporation

Field / Lease: Kane Springs Unit

Service Engineer: Clay Bingham

Chemical Component	Commingled Water	Well 16-1									
		90% A 10% B	80% A 20% B	70% A 30% B	60% A 40% B	50% A 50% B	40% A 60% B	30% A 70% B	20% A 80% B	10% A 90% B	Well 16-1
Chloride (Cl) mg/l	138,000	127,520	117,040	106,560	96,080	85,600	75,120	64,640	54,160	43,680	33,200
Sulfate (SO4) mg/l	280	344	409	473	537	602	666	730	794	859	923
Carbonate (CO3) mg/l	0	0	0	0	0	0	0	0	0	0	0
Bicarbonate (HCO3) mg/l	146	167	188	209	229	250	271	292	312	333	354
Calcium (Ca) mg/l	10200	10404	10608	10812	11016	11220	11424	11628	11832	12036	12240
Magnesium (Mg) mg/l	267	289	311	333	355	377	398	420	442	464	486
Iron (Fe) mg/l	85.0	82.1	79.2	76.3	73.4	70.5	67.6	64.7	61.8	58.9	56.0
Barium (Ba) mg/l	0	0	0	0	0	0	0	0	0	0	0
Strontium (Sr) mg/l	0	0	0	0	0	0	0	0	0	0	0
Sodium (Na) mg/l	77,471	70,438	63,405	56,372	49,340	42,307	35,274	28,241	21,209	14,176	7,143
Ionic Strength	4.17	3.88	3.59	3.31	3.02	2.73	2.45	2.16	1.87	1.58	1.30
Dissolved Solids (TDS)	228,449	208,244	188,039	174,835	157,630	140,425	123,221	106,016	88,812	71,607	54,402
Specific Gravity @ 60F	1.230	1.212	1.194	1.176	1.158	1.140	1.122	1.104	1.086	1.068	1.050
Temperature (F)	65	65	65	65	65	65	65	65	65	65	65
Is (TOMSON-ODDO)	2.14	2.16	2.21	2.24	2.27	2.30	2.34	2.38	2.44	2.51	2.60
Pressure (psia)	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
pH Calculated (Tomson)	8.51	8.55	8.58	8.60	8.63	8.65	8.67	8.70	8.72	8.74	8.77
pH Actual	8.20	6.21	6.22	6.23	6.24	6.25	6.26	6.27	6.28	6.29	6.30
% CO2 (Mole %)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

**Scaling Tendency (Pounds per Thousand BBLs of Scale Which Should Form)**

CaCO3 (Tomson-Oddo)	83.0	94.9	106.8	118.8	130.7	142.6	154.5	166.5	178.5	190.5	202.5
BaSO4 (Tomson)	-0.8	-0.7	-0.6	-0.6	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3	-0.2
CaSO4 (Tomson)	-829.6	-786.7	-736.5	-678.5	-612.7	-539.2	-458.5	-371.9	-281.3	-190.3	-104.8
SrSO4 (Tomson)	-208.8	-205.0	-202.3	-198.4	-192.9	-185.8	-178.6	-165.5	-152.4	-137.5	-121.4

PRINT TIME JAN. 9. 4:19PM

RECEIVED TIME JAN. 9. 4:17PM

Compatibility Evaluation (Pounds per Thousand BBLs of Seals Due to Mixing, C=compatible)

CaCO3 (Tomson-Oddo)	47.3551	56.8559	-0.0872	42.7935	45.1831	47.5817	49.9907	52.4108	54.8419	57.2825	59.7292
BaSO4 (Tomson)	C	C	C	C	C	C	C	C	C	C	C
CaSO4 (Tomson)	C	C	C	C	C	C	C	C	C	C	C
SrSO4 (Tomson)	C	C	C	C	C	C	C	C	C	C	C

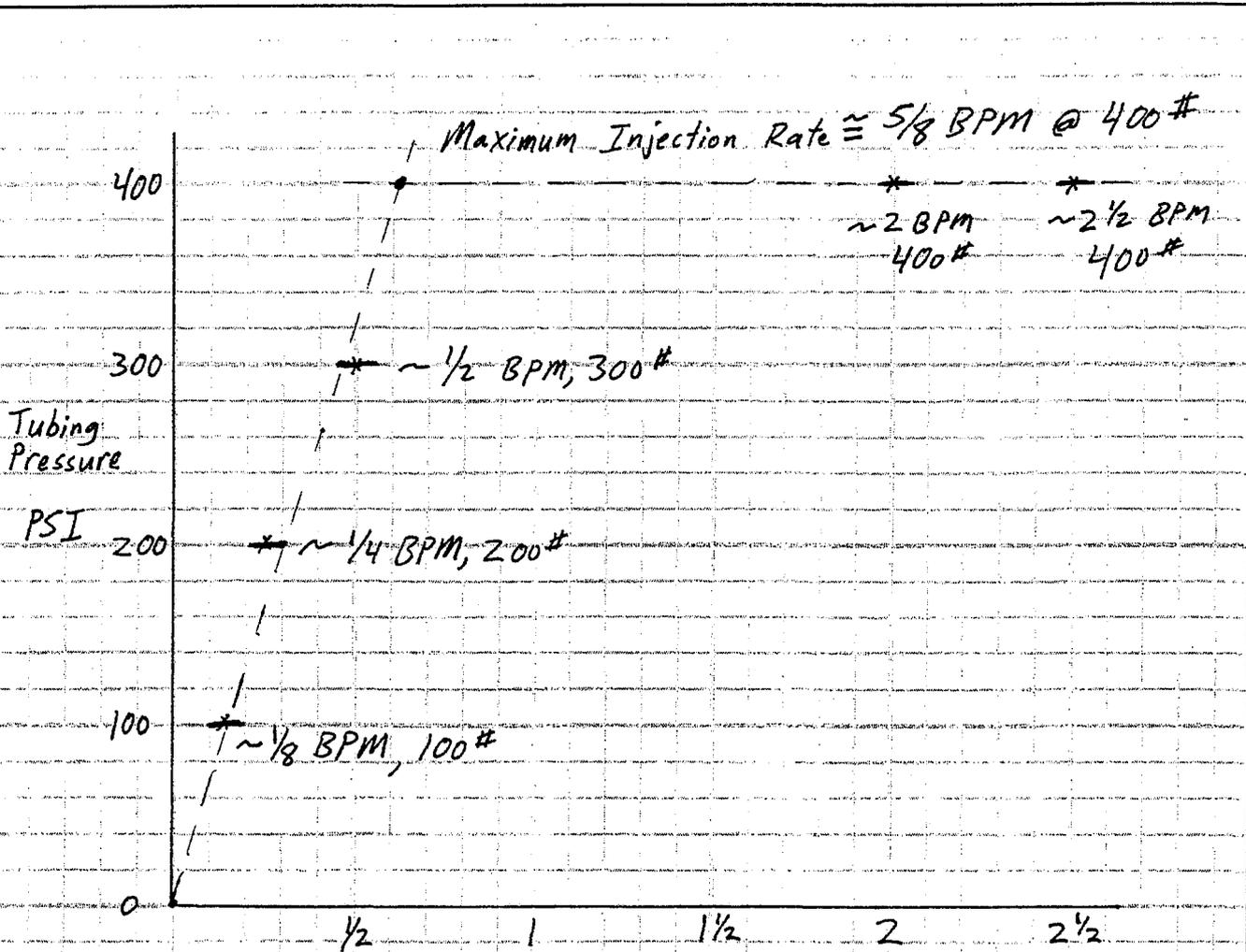
SUBJECT Kane Springs Federal Unit #16-1 SWD

PAGE \_\_\_\_\_ OF \_\_\_\_\_

AFE NO. \_\_\_\_\_

Injection Break Down Test      12-14-00

BY M/S      DATE 1-11-01



Approximate Pump Rate:  
BPM

Surface Frac Pressure is 400# @  $\sim 5/8$  BPM

Max disposal Rate

$$\begin{aligned} & 5/8 \text{ BPM} \times 60 \frac{\text{min}}{\text{hr}} \times 24 \text{ hr/day} \\ & = \underline{900 \text{ BPD}} \end{aligned}$$

Max Proposed rate = 800 BPD



2080 SOUTH 1600 EAST  
VERNAL, UTAH 84078

Disposal Zone Sample

## Water Analysis Report

Telephone (435) 789-4327

**Customer :** Avlara Energy Corp.

**Date Sampled :** 21-Dec-00

**Address :**

**Date Reported :** 08-Jan-01

**City :** Moab

**Date Received :** 02-Jan-01

**State :** UT **Postal Code :**

**Field :** Kane Springs Unit

**Lease :** Kane Springs Unit

**Attention :** Mark Swisher

**Location :** WELL NO. # 16-1

**cc1 :** Charlie Harrison

**Sample Point :** wellhead

**cc2 :**

**Salesman :** Clay Bingham

**cc3 :**

**Comments :**

**Analyst :** Karen Hawkins Allen

### CATIONS

**Calcium :** 12,240 mg/l  
**Magnesium :** 488 mg/l  
**Barium :** 0 mg/l  
**Strontium :** 0 mg/l  
**Iron :** 56.0 mg/l  
**Sodium :** 7145 mg/l

### ANIONS

**Chloride :** 33,200 mg/l  
**Carbonate :** 0 mg/l  
**Bicarbonate :** 354 mg/l  
**Sulfate :** 923 mg/l

**pH (field) :** 6.30  
**Temperature :** 65 degrees F  
**Ionic Strength :** 0.98  
**Resistivity :** ohm/meters  
**Ammonia :** ppm

**Specific Gravity :** 1.0500 grams/ml  
**Total Dissolved Solids :** 54,404 ppm  
**CO2 in Water :** 44 mg/l  
**CO2 in Gas :** 0.03 mole %  
**H2S in Water :** 119.0 mg/l  
**Dissolved Oxygen :** ppm

### SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	0.20	Calcite PTB :	41.3
Calcite (CaCO3) SI @ 100 F :	0.58	Calcite PTB @ 100 F :	96.1
Calcite (CaCO3) SI @ 120 F :	0.77	Calcite PTB @ 120 F :	119.1
Calcite (CaCO3) SI @ 140 F :	0.99	Calcite PTB @ 140 F :	138.2
Calcite (CaCO3) SI @ 160 F :	1.21	Calcite PTB @ 160 F :	152.5
Gypsum (CaSO4) SI :	-0.04	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

**Confidential**  
Champion Technologies, Inc.  
Vernal District Technical Services

Page 1 of 2



2080 SOUTH 1500 EAST  
VERNAL, UTAH 84078

Production Water

## Water Analysis Report

Telephone (435) 759-4327

**Customer :** Avlars Energy Corp.

**Date Sampled :** 21-Dec-00

**Address :**

**Date Reported :** 08-Jan-01

**City :** Moab

**Date Received :** 02-Jan-01

**State :** UT **Postal Code :**

**Field :** Kane Springs Unit

**Lease :** Kane Springs Unit

**Attention :** Mark Swisher

**Location :** Commingled Water

**cc1 :** Charlie Harrison

**Sample Point :** wellhead

**cc2 :**

**Salesman :** Clay Bingham

**cc3 :**

**Comments :**

**Analyst :** Karen Hawkins Allen

### CATIONS

**Calcium :** 10,200 mg/l  
**Magnesium :** 287 mg/l  
**Barium :** 0 mg/l  
**Strontium :** 0 mg/l  
**Iron :** 85.0 mg/l  
**Sodium :** 77478 mg/l

### ANIONS

**Chloride :** 138,000 mg/l  
**Carbonate :** 0 mg/l  
**Bicarbonate :** 148 mg/l  
**Sulfate :** 280 mg/l

**pH (field) :** 6.20  
**Temperature :** 65 degrees F  
**Ionic Strength :** 3.90  
**Resistivity :** ohm/meters  
**Ammonia :** ppm

**Specific Gravity :** 1.2300 grams/ml  
**Total Dissolved Solids :** 226,458 ppm  
**CO2 In Water :** 97 mg/l  
**CO2 In Gas :** 0.03 mole %  
**H2S In Water :** 75.0 mg/l  
**Dissolved Oxygen :** ppm

### SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	-0.38	Calcite PTB :	N/A
Calcite (CaCO3) SI @ 100 F :	-0.01	Calcite PTB @ 100 F :	N/A
Calcite (CaCO3) SI @ 120 F :	0.20	Calcite PTB @ 120 F :	17.0
Calcite (CaCO3) SI @ 140 F :	0.42	Calcite PTB @ 140 F :	32.1
Calcite (CaCO3) SI @ 160 F :	0.65	Calcite PTB @ 160 F :	43.9
Gypsum (CaSO4) SI :	-0.62	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

**Confidential**  
Champion Technologies, Inc.  
Vernal District Technical Services

Page 2 of 2

**AVIARA ENERGY CORPORATION**

1601 Elm Street, Suite 3400  
Dallas, Texas 75201

Robert M. Donohue, Jr., Landman  
Telephone: (214) 880-8924  
Facsimile: (214) 880-8951

February 26, 2002

Mr. John Baza, Associate Director, Oil & Gas  
Utah Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84180

Re: *Aviara Energy Corporation*  
*Kane Springs 16-1*  
*Section 16, Township 25 South, Range 18 East, SLM*  
*Grand County, Utah*

Dear Mr. Baza:

Reference is made to the pending UIC Form 1 Application for Injection Well for the captioned well filed by Aviara Energy Corporation. A copy of this Application is attached.

The lands and formation on which this disposal well is proposed to be located are not subject to a spacing order, *i.e.* general state spacing under Utah Admin. Code Rule R649-3-2 applies. The well is at a location 0960' FSL and 1960' FWL in the SESW of Section 16.

As shown by the submitted Affidavit, the "owners" within a ½ mile radius of the proposed location are Aviara Energy Corporation, Intrepid Oil & Gas LLC, and El Paso Production Oil & Gas USA, L.P.

If you have any further questions of concerns regarding this application please do not hesitate to contact me at Aviara Energy Corporation (214)880-8924. On behalf of Aviara, I thank you for your immediate attention to this matter.

Sincerely,



Bobby Donohue

BD/je  
7338.13  
Enclosures

**RECEIVED**

MAR 06 2002

DIVISION OF  
OIL, GAS AND MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

UIC FORM 1

**APPLICATION FOR INJECTION WELL**

Name of Operator Aviara Energy Corporation	Utah Account Number N 5500	Well Name and Number Kane Springs Federal Unit 16-1
Address of Operator PO Box 1350      CITY Houston      STATE TX      ZIP 77251-1350	Phone Number (713) 871-3400	API Number 4301931341
Location of Well Footage : 960' & 1960' FWL      County : Grand		Field or Unit Name formerly Kane Springs Fed. Unit
QQ, Section, Township, Range: SESW    16    25S    18E      State : UTAH		Lease Designation and Number U-44333

Is this application for expansion of an existing project?      Yes       No

Change injection zone

Will the proposed well be used for:	Enhanced Recovery?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Disposal?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	Storage?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Is this application for a new well to be drilled?      Yes       No

If this application is for an existing well, has a casing test been performed?      Yes       No   
Date of test: 12/09/2000

Proposed injection interval:      from 1,490      to 1,520

Proposed maximum injection:      rate 800 BPD      pressure 400      psig

Proposed injection zone contains oil  gas , and / or fresh water  within 1/2 mile of the well.

List of attachments: Location plat, well bore diagram, CBL (12/12/00), fracture information, water analyses, compatibility test, geologic report

**ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT  
UTAH OIL AND GAS CONSERVATION GENERAL RULES**

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Mark Swisher

Title Production Superintendent

Signature *Mark Swisher*

Date 01/11/2001

**RECEIVED**

MAR 06 2002

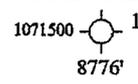
DIVISION OF  
OIL, GAS AND MINING

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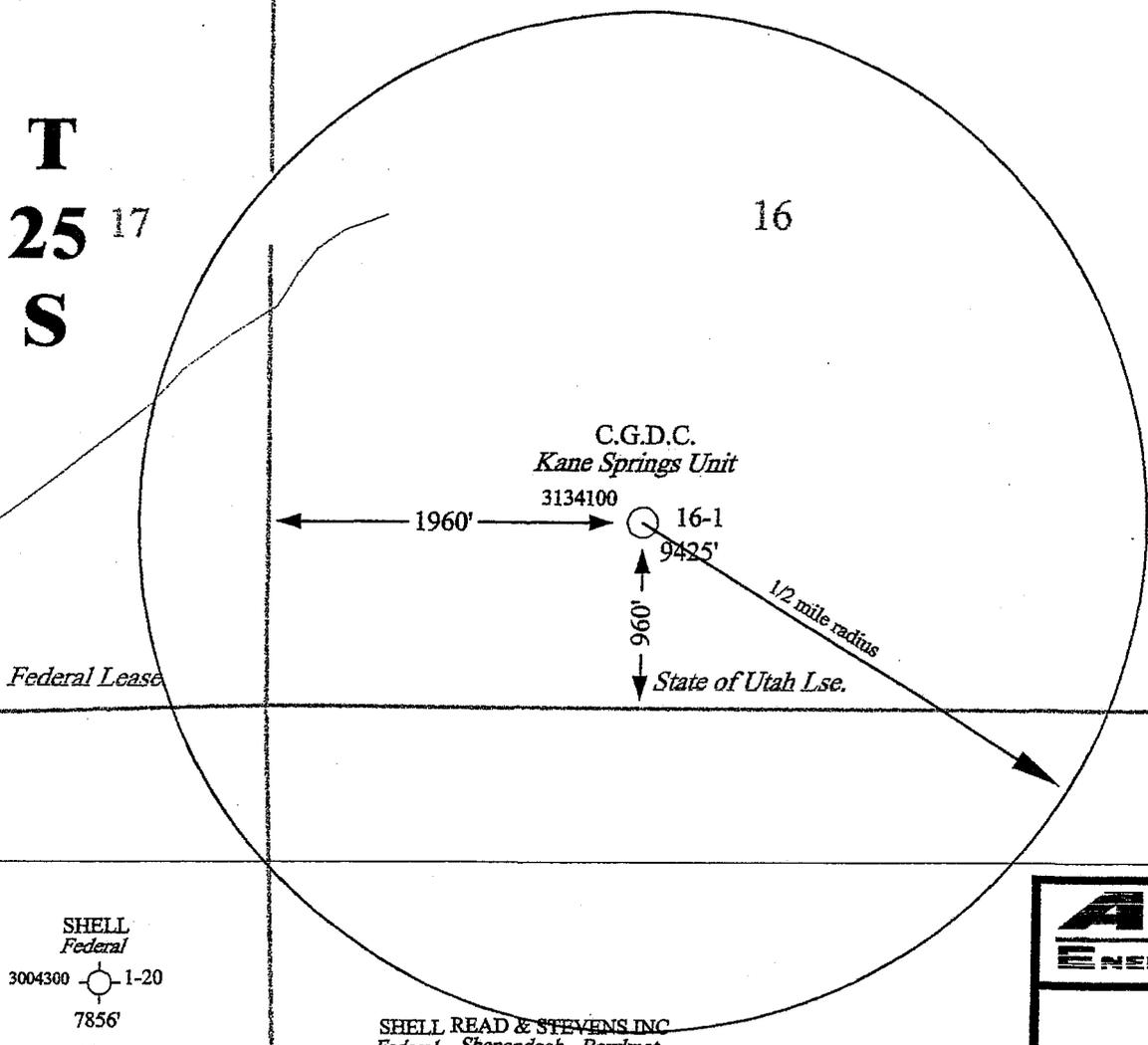
10

MCRAE OIL & GAS CORP  
Mcrac - Federal



T  
25  
S

T  
15  
25  
S



C.G.D.C.  
Kane Springs Unit

3134100  
16-1  
9425'

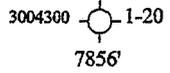
1960'

960'

State of Utah Lse.

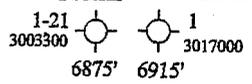
Federal Lease

SHELL  
Federal



20

SHELL READ & STEVENS INC  
Federal Shenandoah - Bowknot



21

Federal Lease

Federal Lease

ALL LEASES OPERATED BY AVIARA ENERGY

**AVIARA**  
ENERGY CORPORATION

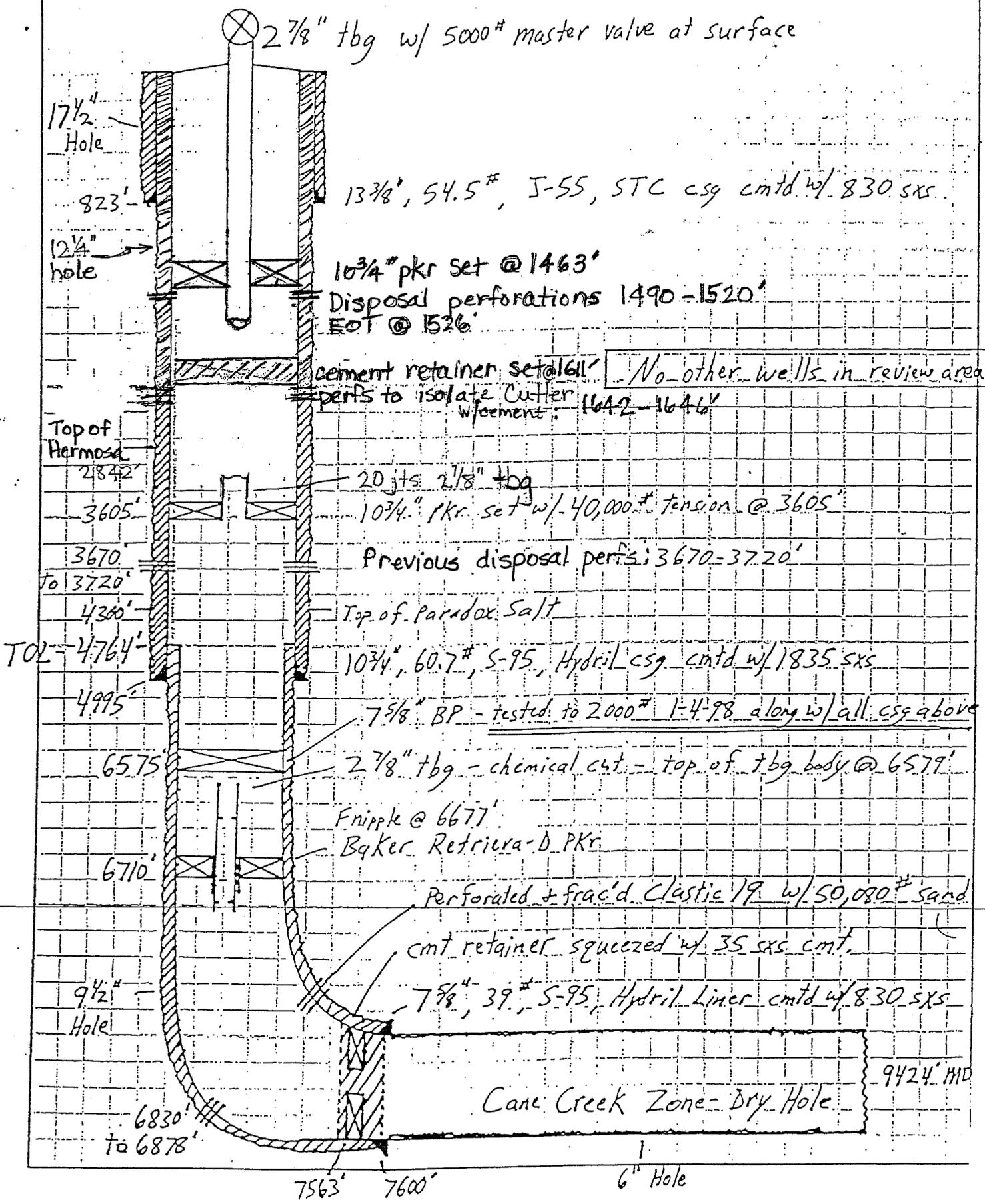
KANE SPRINGS  
GRAND COUNTY, UTAH

Proposed  
**SALT WATER DISPOSAL WELL**

SCALE: 1"=1000'

INTERP. BY: M.D. SWISHER		DATE: 5-FEB-98
DRAFTED BY: S.D.P.	CADFILE: knsp_16-1_dsp1	
ACCT: wa1	MLXFILE: knsprga2	ROT: 1.07040

CURRENT  
Wellbore diagram



# **AVIARA**

**ENERGY CORPORATION**

Aviara Energy Corporation

Kane Springs Unit #16-1 SWD well  
One Riverway, Suite 700  
Houston, Texas 77056

Sec. 16 T25S R18E

Grand County, Utah

Re: Disposal Zone change

I have looked at the Geological implications of moving the current disposal zone from the Honaker Trail to the proposed Cutler Formation. The top of the Cutler formation in the #16-1 is at 1472' (+3692' SS) and is approximately 2200' above our present disposal perfs. The Cutler Formation outcrops at the surface 10 miles to the southeast at the Colorado River below Dead horse State Park. I have constructed a regional Cutler structure map, which shows that the Dead Horse area is high in the subsurface with Northwest dip of over 980' toward the Aviara #16-1 SWD well. Between the Cutler outcrop at Dead Horse State Park and the Aviara #16-1 SWD, the Cane Creek Anticline bisects this area with the #16-1 lying on the north flank of the anticline. From these findings, any fluid movement of disposed salt water in the Cutler Formation should move toward the North-Northwest.

Jon B. Norman  
Senior Geologist  
11/6/00

DIVISION OF OIL, GAS AND MINING  
UNDERGROUND INJECTION CONTROL PROGRAM

**PERMIT (Amended)  
STATEMENT OF BASIS**

**Applicant:** Aviara Energy Corporation      **Well:** Kane Spring Unit # 16-1

**Location:** T25S, R18E, S16, Grand Co., UT      **API:** 4301931341

**Ownership Issues:**

The well is located on State of Utah lands administered by the School and Institutional Trust Lands Administration. United States of America is the other landowner within the half-mile area of review around the proposed injection well. Aviara Energy Corporation controls the leases on these three sections. A sworn Affidavit of Mailing of the application and associated documentation to the particular owners/surface owners has been placed in the well file.

**Well Integrity:**

20" conductor pipe set at 67'. Set 823' of J55 ST&C (54.5#) 13-3/8" casing in a 17-1/2" hole cemented with 450 sacks of HLC Type V cement plus additives. 12-1/4" hole drilled to 4,995' for 10-3/4", 60.7#, S-95 Hydril casing set at 4,995' and cemented w/ 690 sacks of Silica Light plus 1145 sacks PPAG Type 5 plus additives. 9-1/2" hole drilled to 7,603' for 7-5/8", 39#, S95 Hydril 521 liner set at 7,600' and cemented with 175 sacks 14# POZ scavenger, 470 sacks Premium AG-250 and additives. Cement retainer set at 7563' and squeezed with 35 sacks of cement. An Acoustic Cement Bond Log was run between 1650' and 7025'. The top of cement was logged at 1,860'. The 7-5/8" casing was perforated from 6,830' to 6,878' in the Clastic 19 zone. Tubing (2-7/8", 6.5# N-80 EUE) was run into the well and a packer was set at 6,710'. The tubing was chemically cut at 6,579'. A 7 5/8" bridge plug was set at 6575'. Recent work has placed a cement retainer at 1611'. The well was perforated from 1642' to 1646' for a cement squeeze, in order to isolate the Cutler Formation. New disposal perforations were placed in the 10 3/4" casing from 1490' to 1520' and a cement bond log was run over the interval between 1,608' and 30'.

**Ground Water Protection:**

It is unlikely that a significant groundwater resource will be encountered near the surface. Deadman Spring is about a mile north northeast. It flows from the base of the permeable Jurassic Navajo Sandstone, which is eroded away

northwest, southwest and southeast of the location and also for about half a mile to the northeast. The subjacent Jurassic Kayenta Formation is relatively impermeable. The location is surrounded by eolian sand, which frequently covers the Kayenta Formation. A minor water resource may be encountered at the base of the subjacent and more permeable Jurassic Wingate Sandstone. The Wingate Sandstone is the primary cliff forming formation in the canyons of the area and seeps, which can be locally important to wildlife and livestock, are occasionally found at its base. Water production is next encountered in the Permian Cutler Formation (White Rim Sandstone) proposed injection zone. Tests of produced water from this interval in this well have indicated chlorides concentrations of 33,200 mg/l and total dissolved solids levels of 54,404 ppm. The Green River is about 3 miles to the southwest in a canyon about 800' below the location. Surface and intermediate casing will adequately protect this resource. Clastic 23 (the "Cane Creek" zone) of the Paradox Formation provides the field produced (and injected) water. The water is obtained from between 7,400' and 8,200' TVD and, in a nearby production well (19-1A), has shown a total dissolved solids (TDS) level of about 230,000 mg/l.

The zone being permitted for injection is not considered an Underground Source of Drinking Water (USDW; a water source containing less than 10,000 mg/l, total dissolved solids).

It is our conclusion, after reviewing applicable information including the application submitted by Aviara Energy Corporation, that injection into the proposed zone at this location would result in a minor increase in the concentration of the already highly saline water present in the Cutler Formation aquifer, but that, owing to the inability of the well to build injection pressure at this interval (the well has been taking water on a vacuum after initially being broken down), there should be little pressure increase near the well and, consequently, little likelihood of migration up the well bore in a microannulus or via extensional fractures, which have been documented in association with this and other salt-cored anticlines in the Paradox Basin. The operator conducted an injection falloff test to gather data to characterize the injection profile of the injection interval. They have provided evidence, which supports an injection profile that is radial in nature rather than fractured. No long term negative impacts are anticipated as a result of injection of produced water into the subject well.

#### **Oil/Gas & Other Mineral Resources Protection:**

The "Cane Creek" productive zone is protected by casing and cement. No other known potentially producible zones were encountered by the well. The injection zone is isolated some 6,000' above the productive interval.

A review of the well records of the Division of Oil, Gas and Mining for the half-mile area of review indicated that there were no wells within that radius.

The Potash solution / evaporation mining operation along the Colorado River is considered to be too distant (over 16 miles to the southeast) and inaccessible, because of intervening structure, to be impacted by operations at the injection well. Fracture communication between the injection and production zones cannot be supported by previous experiences in the area.

**Bonding:**

Aviara has an \$80,000 plugging surety bond in place, which provides bond coverage for this well.

**Actions Taken and Further Approvals Needed:**

Notice of this application was published in the Salt Lake Tribune, Deseret News and Moab Times Independent. In addition, copies of the notice were provided to the EPA and Aviara Energy Corporation. The notice stated the proposed interval for injection to be from 1,490' to 1,520' in the Cutler Formation. Any future injection into a formation other than the Cutler Formation will require administrative approval after appropriate sampling and testing.

A properly designed and constructed injection well, combined with periodic mechanical integrity tests, poses no threat to fresh or useable groundwater supplies. The Division staff recommends administrative approval of this application.

Note: Applicable technical publications concerning water resources in the general vicinity of this project have been reviewed and taken into consideration during the permit review process.

Reviewer(s): Christopher Kierst

Date: 3/19/02



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor  
Kathleen Clarke  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

UNDERGROUND INJECTION CONTROL PERMIT

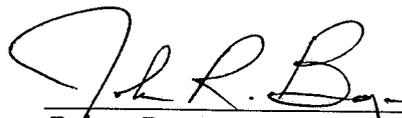
Cause No. UIC-208

Operator: Aviara Energy Corporation  
Wells: Kane Springs Unit #16-1  
Location: Section 16, Township 25 South, Range 18 East,  
County: Grand  
API No.: 43-019-31341  
Well Type: Disposal

Stipulations of Permit Approval

1. Amended approval for injection into the Permian Cutler Formation in the subject well for disposal of produced water was issued on April 1, 2002.
2. Maximum Allowable Injection Pressure: 400 psig
3. Maximum Allowable Injection Rate: 800 BWPD
4. Injection Interval: 1,490 feet to 1,520 feet (Cutler Formation)

Approved by:

  
\_\_\_\_\_  
John R. Baza  
Associate Director

April 1, 2002  
\_\_\_\_\_  
Date

CJK/er

cc: Dan Jackson, Environmental Protection Agency  
Eric Jones, Bureau of Land Management, Moab District Office  
Ed Bonner, School and Institutional Trust Lands Administration



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

C

Michael O. Leavitt  
Governor  
Kathleen Clarke  
Executive Director  
Lowell P. Braxton  
Division Director

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
801-538-5340  
801-359-3940 (Fax)  
801-538-7223 (TDD)

April 1, 2002

Aviara Energy Corporation  
One Riverway, Suite 700  
P. O. Box 1350  
Houston, Texas 77251-1350

Re: Amended Conversion Approval for the Kane Springs Unit #16-1 Well, Section 16, Township 25 South, Range 18 East, Grand County, Utah

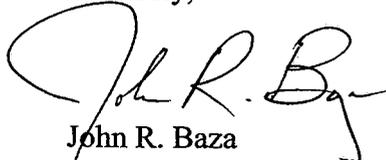
Gentlemen:

Pursuant to Utah Administrative Code R649-5-3-3, the Division of Oil, Gas and Mining (the "Division") issues its amended administrative approval for conversion of the referenced well to inject into the Permian Cutler Formation, for the purpose of disposal of produced water. Accordingly, the following stipulations shall apply for full compliance with this approval:

1. Compliance with all applicable requirements for the operation, maintenance and reporting for Underground Injection Control ("UIC") Class II injection wells pursuant to Utah Admin. Code R649-1 et seq.
2. Conformance with all conditions and requirements of the complete application submitted by Aviara Energy Corporation.

If you have any questions regarding this approval or the necessary requirements, please contact Christopher Kierst at this office.

Sincerely,



John R. Baza  
Associate Director

CJK:er

cc: Dan Jackson, Environmental Protection Agency  
Eric Jones, Bureau of Land Management, Moab District Office  
Ed Bonner, School and Institutional Trust Lands Administration

**HUNT PETROLEUM (AEC), INC.**  
1601 Elm Street, Suite 3400  
Dallas, Texas 75201

July 11, 2002

State of Utah  
Department of Oil, Gas & Minerals  
1594 West N. Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

Attn: Mr. Jim Hamilton

Re: Travelers Bond No. 103860066

Dear Sir:

This is to advise you that Aviara Energy Corporation has changed its name to Hunt Petroleum (AEC), Inc., effective July 1, 2002. Attached is a Surety Rider to Travelers Bond #103860066 (which replaced CNA Bond No. 159209096) and a copy of the Surety Bond on State of Utah Form 4A currently on file with the State of Utah, Department of Natural Resources.

If you have any questions please give me a call at (214) 880-8916.

Yours very truly,



Mary Melvin  
Legal Assistant

attachments

cc: Max Gardner (w/enc.)  
Donny Worthington (w/enc.)  
Gerald Phillips (w/enc.)

Receipt acknowledged this \_\_\_ day of July 2002.

STATE OF UTAH, Department of Oil, Gas & Minerals

By: \_\_\_\_\_

Title: \_\_\_\_\_

**RECEIVED**  
JUL 15 2002  
DIVISION OF  
OIL, GAS AND MINING



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Colorado State Office  
2850 Youngfield Street  
Lakewood, Colorado 80215-7076

IN REPLY REFER TO:  
3106 (MM)

July 22, 2002

## NOTICE

Hunt Petroleum (AEC), Inc. :  
1601 Elm Street, Suite 3400 : Oil and Gas  
Dallas, TX 75201 :

### Name Change Recognized

Acceptable evidence was filed and accepted by this office concerning the name change of Aviara Energy Corporation to Hunt Petroleum (AEC), Inc. with Hunt Petroleum (AEC), Inc. being the surviving entity. For our purposes, the name change was recognized effective July 1, 2002 the date of acceptance by the Secretary of the State of Delaware.

A rider changing the name of the principal on Nationwide bond number 159209244 (BLM Bond CO-1274) previously held by Aviara and issued by Continental Casualty Company, was changed to Hunt Petroleum (AEC), Inc. effective July 12, 2002.

The oil and gas lease files identified on the enclosed Exhibit A, supplied by Hunt Petroleum (AEC), Inc. were updated to reflect the new name. We have not abstracted the lease files to determine if the entities affected by the name change hold an interest in the leases identified nor have we attempted to identify leases where the entity is the operator on the ground maintaining no vested record title or operating rights interests. We are notifying the Mineral Management Services (MMS) and applicable Bureau of Land Management (BLM) Field Offices of the name change by copy of this notice. If our field offices require additional documentation for changes of operator, they will contact you.

If you identify additional leases where the affected parties maintain an interest, please contact this office and we will document the files under our jurisdiction with a copy of this Notice. If the leases are under the jurisdiction of another State Office, we will notify them.

If you have any questions concerning this correspondence, please call Martha Maxwell at (303)239-3768.

*Michelle K. Derringer*  
FOR Beverly Derringer  
Chief, Fluid Minerals Adjudication

Exhibit A sent to Eastern SO, New Mexico SO, Montana SO, Utah SO, Wyoming SO &  
MMS-MRM, MS357B1, PO Box 5760, Denver, CO 80217  
Decision Letter sent to All State Offices via BLM\_Fluids\_Forum

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>See attachment</u>		7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: Hunt Petroleum (AEC), Inc.		8. WELL NAME and NUMBER:
3. ADDRESS OF OPERATOR: 1601 Elm Street, Suite 3400 Dallas, TX 75201	PHONE NUMBER: 214-880-8855	9. API NUMBER:
4. LOCATION OF WELL FOOTAGES AT SURFACE:		10. FIELD AND POOL, OR WILDCAT:
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		COUNTY:
		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Change of company from Aviara Energy Inc. to Hunt Petroleum (AEC), Inc. effective July 1, 2002.

NAME (PLEASE PRINT) <u>Lisa Augustine</u>	TITLE <u>Agent</u>
SIGNATURE <u><i>Lisa Augustine</i></u>	DATE <u>August 6, 2002</u>

(This space for State use only)

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OIL, GAS AND MINING

api	well_name	section	township	range	ll_status_m
4301931310	KANE SPRINGS FED 27-1	27	250S	190E	P
4301931324	KANE SPRINGS FED 19-1A	19	260S	200E	P
4301931325	KANE SPRINGS FED 28-1	28	250S	190E	S
4301931331	KANE SPRINGS FED 10-1	10	250S	180E	P
4301931332	KANE SPRINGS FED 20-1	20	260S	190E	S
4301931334	KANE SPRINGS FED 25-19-34-1	34	250S	190E	P
4301931363	CANE CREEK FEDERAL 7-1	07	250S	190E	DRL
4301931364	CANE CREEK FED 11-1	11	260S	190E	DRL
4301931365	CANE CREEK 30-1	30	260S	200E	APD
4301931379	KANE SPRINGS FED 3-1	03	260S	190E	APD
4303730572	GOVT EVELYN CHAMBERS 1	06	310S	240E	S
4303730612	GOVT EVELYN CHAMBERS 2	05	310S	240E	S
4304731768	COWDEN 31-3-C	31	060S	210E	S
4304731769	FEDERAL 33-6-F	33	060S	210E	P
4304731787	FEDERAL 33-8-N	33	060S	210E	P
4304731804	FEDERAL 33-3-J	33	060S	210E	S
4304731844	FEDERAL 33-7-L	33	060S	210E	P
4301931341	KANE SPRINGS 16-1	16	250S	180E	A
4304731776	ALTA 5-1-B	05	070S	210E	P
4304731843	ALTA 5-2-C	05	070S	210E	P

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

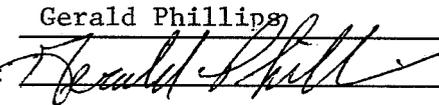
UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

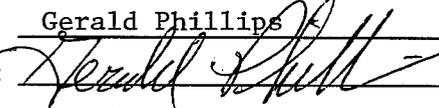
Well Name and Number Kane Springs Federal Unit #16-1	API Number 4301931341
Location of Well Footage : _____ County : _____ QQ, Section, Township, Range: 16 T25S R18E State : UTAH	Field or Unit Name Kane Springs Lease Designation and Number U44333

EFFECTIVE DATE OF TRANSFER: July 1, 2002

CURRENT OPERATOR

Company: Aviara Energy Corporation Name: Gerald Phillips  
Address: 1601 Elm Street, Suite 3400 Signature:   
city Dallas state TX zip 75201 Title: Agent  
Phone: 214-880-8852 Date: August 6, 2002  
Comments:

NEW OPERATOR

Company: Hunt Petroleum (AEC), Inc. Name: Gerald Phillips  
Address: 1601 Elm Street, Suite 3400 Signature:   
city Dallas state TX zip 75201 Title: Agent  
Phone: 214-880-8852 Date: August 6, 2002  
Comments:  
Company name change from Aviara Energy to Hunt Petroleum (AEC), Inc.  
effective July 1, 2002.

(This space for State use only)

Transfer approved by:   
Title: Prod. Services Manager

Approval Date: 8-7-02

Comments:

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OIL, GAS AND MINING



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**7. Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: 07/01/2002

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**8. Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: N/A

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**9. Underground Injection Control ("UIC")**

The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 07/08/2002

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**DATA ENTRY:**

1. Changes entered in the **Oil and Gas Database** on: 08/07/2002
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 08/07/2002
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

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**STATE WELL(S) BOND VERIFICATION:**

1. State well(s) covered by Bond Number: 103860074

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**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: N/A

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**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: N/A

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**FEE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A
2. The **FORMER** operator has requested a release of liability from their bond on: N/A  
The Division sent response by letter on: N/A

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**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

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**COMMENTS:**

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STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-44333</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Kane Springs Federal Unit</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Salt Water Disposal Well</u>		7. UNIT or CA AGREEMENT NAME: <b>Kane Springs #16-1 SWD</b>
2. NAME OF OPERATOR: <b>Intrepid Oil &amp; Gas, LLC</b> <span style="float: right;"><i>N6810</i></span>		8. WELL NAME and NUMBER: <b>Kane Springs #16-1 SWD</b>
3. ADDRESS OF OPERATOR: <b>700 17th Street</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80202</b>		9. API NUMBER: <b>4301931341</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>960' FSL, 1960' FWL</b>		10. FIELD AND POOL, OR WILDCAT: <b>Grand</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESW 16 25S 18E</b>		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective April 23, 2003, Intrepid Oil & Gas, LLC accepted designation as successor operator of the Kane Springs Federal Unit and also accepts designation as successor operator of this well.

NAME (PLEASE PRINT) <u>H. Richard Miller</u>	TITLE <u>Special Projects Manager</u>
SIGNATURE <u><i>H. Richard Miller</i></u>	DATE <u>5/29/2003</u>

(This space for State use only)

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**JUN 02 2003**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL		OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Saltwater Disposal Well</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>ML-44333</b>
2. NAME OF OPERATOR: <b>Hunt Petroleum (AEC), Inc.</b> <i>N 2180</i>		3. ADDRESS OF OPERATOR: <b>P.O. Box 1350</b> CITY <b>Houston</b> STATE <b>TX</b> ZIP <b>77251</b>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
4. LOCATION OF WELL		FOOTAGES AT SURFACE: <b>960' FSL, 1960' FWL</b>		7. UNIT or CA AGREEMENT NAME: <b>Kane Springs Federal Unit</b>
		QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESW 16 25S 18E</b>		8. WELL NAME and NUMBER: <b>Kane Springs #16-1 SWD</b>
		COUNTY: <b>Grand</b>		9. API NUMBER: <b>4301931341</b>
		STATE: <b>UTAH</b>		10. FIELD AND POOL, OR WILDCAT:

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On April 28, 2003, Hunt Petroleum (AEC), Inc. resigned as Operator of the Kane Springs Federal Unit and Intrepid Oil & Gas, LLC was designated successor Unit Operator. Concurrent with this action, Hunt Petroleum (AEC), Inc. resigns as Operator of this well and names Intrepid Oil & Gas, LLC as successor Operator.

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**JUN 02 2003**  
**DIV. OF OIL, GAS & MINING**

NAME (PLEASE PRINT) <u>Bobby Donohue</u>	TITLE <u>Landman</u>
SIGNATURE	DATE <u>May 13, 2003</u>

(This space for State use only)

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number Kane Springs Federal #18-1 SWD	API Number 4301891341
Location of Well Footage: 960 FSL, 1060 FWL County: Grand	Field or Unit Name Kane Springs
CC Section, Township, Range: S25W 16 25S 16E State: UTAH	Lease Designation and Number ML-44333

EFFECTIVE DATE OF TRANSFER: 4/28/2003

**CURRENT OPERATOR**

Company: <u>Hunt Petroleum (AEC), Inc.</u>	Name: <u>James M. Wylie</u>
Address: <u>P.O. Box 1350</u>	Signature: <u>[Signature]</u>
city <u>Houston</u> state <u>TX</u> zip <u>77261</u>	Title: <u>Operations Manager</u>
Phone: <u>(713) 871-3400</u>	Date: <u>6/30/03</u>
Comments: <u>Effective 4/28/03 Hunt Petroleum (AEC), Inc. hereby resigns as operator of the Kane Springs Unit and Kane Springs Federal #18-1 SWD well and designates Intrepid Oil &amp; Gas, LLC as successor operator.</u>	

**NEW OPERATOR**

Company: <u>Intrepid Oil &amp; Gas, LLC</u>	Name: <u>H. Richard Miller</u>
Address: <u>700 17th Street, Suite 1700</u>	Signature: <u>[Signature]</u>
city <u>Denver</u> state <u>CO</u> zip <u>80202</u>	Title: <u>Special Projects Manager</u>
Phone: <u>(303) 296-5006</u>	Date: <u>6/30/03</u>
Comments: <u>Effective 4/28/03 Hunt Petroleum (AEC), Inc. resigned as operator of the Kane Springs Unit and Kane Springs Federal #18-1 SWD well and Intrepid Oil &amp; Gas, LLC accepts designation as successor operator.</u>	

(This space for State use only)

Transfer approved by: [Signature] Approval Date: 9/30/03  
Title: Field Services Manager

Comments: This well is due for a mechanical integrity test (MIT).



7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA n/a

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: 4/28/2003

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 9/30/2003

**DATA ENTRY:**

- 1. Changes entered in the **Oil and Gas Database** on: 9/30/2003
- 2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 9/30/2003
- 3. Bond information entered in RBDMS on: N/A
- 4. Fee wells attached to bond in RBDMS on: N/A

**STATE WELL(S) BOND VERIFICATION:**

1. State well(s) covered by Bond Number: CA 101

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: N/A

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: N/A

**FEE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A

2. The **FORMER** operator has requested a release of liability from their bond on: N/A  
The Division sent response by letter on: N/A

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

**COMMENTS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. DJJ
2. CDW

**X - Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

**10/1/2006**

<b>FROM:</b> (Old Operator): N6810-Intrepid Oil & Gas, LLC 700 17th St, Suite 1700 Denver, CO 80202 Phone: 1 (303) 296-3006	<b>TO:</b> ( New Operator): N3135-Babcock & Brown Energy, Inc. 1512 Larimer St, Suite 550 Denver, CO 80202 Phone: 1 (303) 460-1132
---	--

**CA No.**

**Unit:**

**CANE CREEK**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
KANE SPRINGS 16-1	16	250S	180E	4301931341	11484	State	WD	A

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 12/18/2006
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 12/18/2006
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 12/28/2006
- Is the new operator registered in the State of Utah: YES Business Number: 6404096-0143
- (R649-9-2)Waste Management Plan has been received on: REQUESTED
- Inspections of LA PA state/fee well sites complete on: n/a
- Reports current for Production/Disposition & Sundries on: OK
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 12/19/2006 BIA
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: 12/19/2006
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 1/4/2007

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 1/11/2007
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 1/11/2007
- Bond information entered in RBDMS on: 1/11/2007
- Fee/State wells attached to bond in RBDMS on: 1/11/2007
- Injection Projects to new operator in RBDMS on: 1/11/2007
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: UTB000240
- (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 8785513659
- The **FORMER** operator has requested a release of liability from their bond on: not yet

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

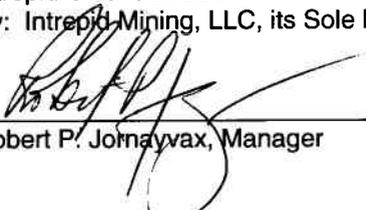
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: See attached Exhibit
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: See attached Exhibit
2. NAME OF OPERATOR: Babcock & Brown Energy Inc. <span style="float: right; font-size: 1.5em;">N3135</span>		8. WELL NAME and NUMBER: See attached Exhibit
3. ADDRESS OF OPERATOR: 1512 Larimer St, Suite 550 <small>CITY</small> Denver <small>STATE</small> CO <small>ZIP</small> 80202		9. API NUMBER: See attach
4. LOCATION OF WELL FOOTAGES AT SURFACE: SEE ATTACHED EXHIBIT FOR ALL WELLS & DETAILS <span style="float: right; font-size: 1.5em;">1132</span>		10. FIELD AND POOL, OR WILDCAT: See attached Exhibit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		COUNTY:  STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective October 1, 2006, Intrepid Oil & Gas LLC resigned as Operator of the wells listed on the attached Exhibit and Babcock & Brown Energy Inc. has been designated as successor Operator. Concurrent with this action, Intrepid Oil & Gas LLC resigns as Operator of this well and names Babcock & Brown Energy Inc. as successor Operator. Bond Number 8785513659 will be used to cover operations by Babcock & Brown Energy Inc. (BLM Statewide Bond UTB-00240)

Intrepid Oil & Gas LLC  
By: Intrepid Mining, LLC, its Sole Member  
  
Robert P. Jorjanyax, Manager

N6810

NAME (PLEASE PRINT) <u>Van Z. Spence</u>	TITLE <u>President</u>
SIGNATURE 	DATE <u>11/15/2006</u>

(This space for State Use Only)  
**APPROVED** 111107=UIC  
  
Earlene Russell  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

*12/28/06*  
*all other wells*

**RECEIVED**  
**DEC 18 2006**  
DIV. OF OIL, GAS & MINING

## EXHIBIT "A"

Attached to Form 9, Change of Operator, from Intrepid Oil & Gas LLC to Babcock & Brown Energy Inc., effective October 1, 2006

LEASE	UNIT	WELL NAME/NUMBER	API NO.	FIELD	LOCATION							TYPE
					Footage	QrtQrt	Sec.	Twp	Rge	County		
UTU 047858	N/A	Long Canyon No. 1	43-019-15925	Long Canyon	2,339' FNL	2,473' FWL	SENW	9	26S	20E	Grand	Oil Well
UTU 065971	Kane Springs	Kane Springs Federal No. 27-1	43-019-31310	Big Flat	1,650' FSL	1,700' FEL	NWSE	27	25S	19E	Grand	Oil Well
UTU 053626	Kane Springs	Kane Springs Federal No. 19-1A	43-019-31324	Park Road	800' FSL	1,918' FEL	SWNE	19	26S	20E	Grand	Oil Well
ML-40761	Cane Creek	Cane Creek No. 2-1	43-019-31396	Big Flat	2,289' FNL	518' FEL	SENE	2	26S	19E	Grand	Oil Well
UTU 047858	Kane Springs	Kane Springs Federal No. 10-1	43-019-31331	Hell Roaring	2,333' FSL	2,112' FEL	NWSE	10	25S	18E	Grand	Oil Well
UTU 053624	Kane Springs	Kane Springs Federal No. 25-19-34-1	43-019-31334	Big Flat	934' FNL	1,678' FEL	NWNE	34	25S	19E	Grand	Oil Well
ML 44333	Kane Springs	Kane Springs Federal No. 16-1	43-019-31341	Wildcat	960' FSL	1,960' FWL	SESW	16	25S	18E	Grand	Water Disposal
UTU 065972	Cane Creek	Cane Creek No. 1-1 (Permit)	43-019-31446	Wildcat	2,240' FSL	1,317' FWL	NWSW	1	26S	19E	Grand	Oil Well
UTU 068122	Cane Creek	Cane Creek No.8-1 (Permit)	43-019-31449	Wildcat	2,563' FNL	1,429' FWL	SENW	8	26S	20E	Grand	Oil Well
UTU 046693	Cane Creek	Cane Creek 24-1 (Permit)	43-019-31447	Wildcat	682' FNL	2,829' FEL	NENW	24	26S	19E	Grand	Oil Well

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

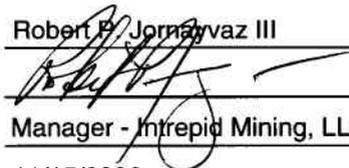
UIC FORM 5

**TRANSFER OF AUTHORITY TO INJECT**

Well Name and Number Kane Springs Federal #16-1 SWD		API Number 4301931341
Location of Well Footage : 960' FSL, 1960' FWL County : Grand		Field or Unit Name Kane Springs
QQ, Section, Township, Range: SESW 16 25S 18 State : UTAH		Lease Designation and Number ML 44333

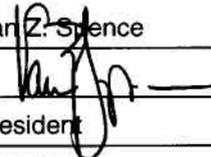
**EFFECTIVE DATE OF TRANSFER:** 10/1/2006

**CURRENT OPERATOR**

Company: <u>Intrepid Oil &amp; Gas LLC</u> <i>N6810</i>	Name: <u>Robert P. Jorjanyvaz III</u>
Address: <u>700 17th Street, Suite 1700</u>	Signature: 
city <u>Denver</u> state <u>CO</u> zip <u>80202</u>	Title: <u>Manager - Intrepid Mining, LLC, Sole Membe</u>
Phone: <u>(303) 296-3006</u>	Date: <u>11/15/2006</u>

Comments: Effective 10/1/2006 Intrepid Oil & Gas LLC hereby resigns as operator of the Kane Springs Unit and Kane Springs Federal #16-1 SWD well and designates Babcock & Brown Energy Inc. as successor operator.

**NEW OPERATOR**

Company: <u>Babcock &amp; Brown Energy Inc.</u> <i>N3135</i>	Name: <u>Van Z. Spence</u>
Address: <u>1512 Larimer Street, Suite 550</u>	Signature: 
city <u>Denver</u> state <u>CO</u> zip <u>80202</u>	Title: <u>President</u>
Phone: <u>(303) 460-1205 1132</u>	Date: <u>11/15/2006</u>

Comments: Effective 11/15/2006 Intrepid Oil & Gas LLC resigned as operator of the Kane Springs Unit and Kane Springs Federal #16-1 SWD well and Babcock & Brown Energy Inc. hereby accepts designation as successor operator.

(This space for State use only)

Transfer approved by:  Approval Date: 11/4/07  
Title: UIG Geologist

Comments: *This approval is contingent on a successful MET*

**RECEIVED**  
**DEC 18 2006**  
DIV. OF OIL, GAS & MINING



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155



IN REPLY REFER TO  
3180  
UT-922

DEC 19 2006

Babcock & Brown Energy Inc.  
1512 Larimer, Suite 550  
Denver, CO 80202

Re: Cane Creek Unit  
Grand & San Juan Counties,

Gentlemen:

On December 18, 2006, we received an indenture dated October 1, 2006, whereby Intrepid Oil & Gas LLC resigned as Unit Operator and Babcock & Brown Energy Inc. was designated as Successor Unit Operator for the Cane Creek Unit, Grand and San Juan Counties, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective December 19, 2006. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Cane Creek Unit Agreement.

Your statewide (Utah) oil and gas Bond No. UTB000240 will be used to cover all operations within the Cane Creek Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

*/s/ Douglas Cook*

Douglas Cook  
Chief, Branch of Fluid Minerals

Enclosure

bcc: Field Manager -Moab (w/enclosure)  
SITLA  
Division of Oil, Gas & Mining  
Dockets  
File -Cane Creek Unit (w/enclosure)  
Agr. Sec. Chron  
Reading File  
Central Files  
CSeare:cs12/19/06Babcock

RECEIVED

DEC 21 2006

DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>U-44333</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME: <b>Kane Springs Federal Unit</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Injection Well</u>	8. WELL NAME and NUMBER: <b>Kane Springs State 16-1</b>	
2. NAME OF OPERATOR: <b>Babcock and Brown Energy, Inc.</b>		9. API NUMBER: <b>019-31341</b>
3. ADDRESS OF OPERATOR: 1512 Larimer, Suite 550      CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80202</b>	PHONE NUMBER: <b>(303) 460-1132</b>	10. FIELD AND POOL, OR WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>1960' FWL, 960' FSL</b>		COUNTY: <b>Grand</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SESW 16 25S 18E</b>		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> PRODUCTION (START/RESUME)  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> TEMPORARILY ABANDON  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> WATER SHUT-OFF  <input type="checkbox"/> OTHER: <u>Mechanical Integrity Test</u>
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: <b>1/16/2007</b>			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

On January 16, 2007 this well underwent a successful mechanical integrity test. The well was pressured to 450 psig and held that pressure with no drop for 15 minutes. The test was witnessed by a Division of Oil, Gas and Mining field inspector, Mr. Bart Kettle and by our Field Representative, Mr. Charlie Harrison.

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

Date: 01-23-07  
By: [Signature]

NAME (PLEASE PRINT) <u>James Rowland</u>	TITLE <u>Engineer</u>
SIGNATURE <u>[Signature]</u>	DATE <u>1/18/2007</u>

(This space for State use only)

**RECEIVED  
JAN 22 2007**

DIV. OF OIL, GAS & MINING

Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

**ROUTING**

1. DJJ
2. CDW

**X - Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

**1/1/2008**

<b>FROM: (Old Operator):</b> N3135-Babcock & Brown Energy, Inc. 1512 Larimer St, Suite 550 Denver, CO 80202 Phone: 1 (303) 460-1132	<b>TO: (New Operator):</b> N3155-Fidelity Exploration & Production Co 1700 Broadway, Suite 2800 Denver, CO 80203 Phone: 1 (303) 893-3133
---	--

**CA No. Unit: CANE CREEK**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
KANE SPRINGS FED 27-1	27	250S	190E	4301931310	14506	FEDERAL	OW	P
KANE SPRINGS FED 19-1A	19	260S	200E	4301931324	14507	FEDERAL	OW	P
KANE SPRINGS FED 10-1	10	250S	180E	4301931331	14509	FEDERAL	OW	P
KANE SPRINGS FED 25-19-34-1	34	250S	190E	4301931334	14511	FEDERAL	OW	P
KANE SPRINGS 16-1	16	250S	180E	4301931341	11484	STATE	WD	A
CANE CREEK 2-1	02	260S	190E	4301931396	14505	STATE	OW	P

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 1/11/2008
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 1/11/2008
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 1/28/2008
- 4a. Is the new operator registered in the State of Utah: yes Business Number: 4917099-0143
- 5a. (R649-9-2) Waste Management Plan has been received on: IN PLACE
- 5b. Inspections of LA PA state/fee well sites complete on: n/a
- 5c. Reports current for Production/Disposition & Sundries on: \_\_\_\_\_
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM not yet BIA
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 1/29/2008

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 1/31/2008
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 1/31/2008
- Bond information entered in RBDMS on: 1/31/2008
- Fee/State wells attached to bond in RBDMS on: 1/31/2008
- Injection Projects to new operator in RBDMS on: 1/31/2008
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: CO1345
- 3a. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 190017646
- 3b. The **FORMER** operator has requested a release of liability from their bond on: not yet

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

**COMMENTS:** 3 Wells on list were previously moved due to Designation of Agent

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: See Attached Exhibit
2. NAME OF OPERATOR: Fidelity Exploration & Production Company <i>N3/55</i>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1700 Broadway, Suite 2800 CITY Denver STATE CO ZIP 80203		7. UNIT or CA AGREEMENT NAME: See Attached Exhibit
4. LOCATION OF WELL FOOTAGES AT SURFACE: SEE ATTACHED EXHIBIT FOR ALL WELLS AND DETAILS COUNTY:		8. WELL NAME and NUMBER: See Attached Exhibit
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		9. API NUMBER: See Attach
		10. FIELD AND POOL, OR WILDCAT: See Attached Exhibit
		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

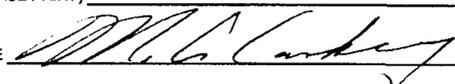
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective January 1, 2008, Babcock & Brown Energy Inc. resigned as Operator of the wells listed on the attached Exhibit and Fidelity Exploration & Production Company has been designated as successor Operator. Concurrent with this action, Babcock & Brown Energy Inc. resigns as Operator of these wells and names Fidelity Exploration & Production Company as successor Operator. BLM Blanket Bond Number CO1345 and Utah OGCC Blanket Bond Number 190017646 will be used to cover operations by Fidelity Exploration & Production Company.

BABCOCK & BROWN ENERGY INC. *N3/35*

By  \_\_\_\_\_  
Van Z. Spence, Resident  
*1512 Larimer St., Suite 550*  
*Denver Co 80202*  
*(303) 460-1132*

NAME (PLEASE PRINT) Michael C. Caskey TITLE Executive Vice President & Chief Operating Officer  
SIGNATURE  DATE January 1, 2008

(This space for State use only)

APPROVED 1/31/2008  
*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

RECEIVED  
JAN 11 2008  
DIV. OF OIL, GAS & MINING

**EXHIBIT "A"**

Attached to Form 9, Change of Operator, from Babcock & Brown Energy Inc. to Fidelity Exploration & Production Company, effective January 1, 2008

LEASE	UNIT	WELL NAME/NUMBER	API NO.	FIELD	LOCATION							TYPE
					Footage	QrtQrt	Sec.	Twp	Rge	County		
UTU 010529	N/A	Long Canyon No. 1	43-019-15925	Long Canyon	2,339' FNL	2,473' FWL	SENW	9	26S	20E	Grand	Oil Well
UTU 065971	Cane Creek	Kane Springs Federal No. 27-1	43-019-31310	Big Flat	1,650' FSL	1,700' FEL	NWSE	27	25S	19E	Grand	Oil Well
UTU 053626	Cane Creek	Kane Springs Federal No. 19-1A ST	43-019-31324	Park Road	800' FSL	1,918' FEL	SWSE	19	26S	20E	Grand	Oil Well
ML-40761 / UTU 065972	Cane Creek	Cane Creek No. 2-1	43-019-31396	Big Flat	2,289' FNL	518' FEL	SENE	2	26S	19E	Grand	Oil Well
UTU 047858	Cane Creek	Kane Springs Federal No. 10-1	43-019-31331	Hell Roaring	2,333' FSL	2,112' FEL	NWSE	10	25S	18E	Grand	Oil Well
UTU 053624	Cane Creek	Kane Springs Federal No. 25-19-34-1	43-019-31334	Big Flat	934' FNL	1,678' FEL	NWNE	34	25S	19E	Grand	Oil Well
ML-44333	Cane Creek	Kane Springs Federal No. 16-1	43-019-31341	Wildcat	960' FSL	1,960' FWL	SESW	16	25S	18E	Grand	Water Disposal
UTU 065972	Cane Creek	Cane Creek No. 1-1* (Permit)	43-019-31446	Wildcat	2,240' FSL	1,317' FWL	NWSW	1	26S	19E	Grand	
UTU 068122	Cane Creek	Cane Creek No. 8-1* (Drilling)	43-019-31449	Wildcat	2,563' FNL	1,429' FWL	SENW	8	26S	20E	Grand	
UTU 065973	Cane Creek	Cane Creek No. 24-1* (Drilling)	43-019-31447	Big Flat	682' FNL	2,829' FEL	NENW	24	26S	19E	Grand	

\* previously changed by Designation of Operator

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number Kane Springs Federal #16-1 SWD	API Number 4301931341
Location of Well Footage : 960' FSL, 1960' FWL County : Grand QQ, Section, Township, Range: SESW 16 25S 18E State : UTAH	Field or Unit Name Cane Creek Unit Lease Designation and Number ML 44333

EFFECTIVE DATE OF TRANSFER: 1/1/2008

CURRENT OPERATOR

Company: Babcock & Brown Energy Inc.  
Address: 1512 Larimer Street, Suite 550  
city Denver state CO zip 80202  
Phone: (303) 460-1132

Name: Van Z. Spence  
Signature: [Signature]  
Title: President  
Date: January 1, 2008

Comments: Effective 1/1/2008, Babcock & Brown Energy Inc. resigned as Operator of the Cane Creek Unit and Kane Springs Federal #16-1 SWD well and designates Fidelity Exploration & Production Company as successor operator.

NEW OPERATOR

Company: Fidelity Exploration & Production Company  
Address: 1700 Broadway, Suite 2800  
city Denver state CO zip 80203  
Phone: (303) 893-3133

Name: Michael C. Caskey  
Signature: [Signature]  
Title: Exec. Vice President & COO  
Date: January 1, 2008

Comments: Effective 1/1/2008, Babcock & Brown Energy Inc. resigned as Operator of the Cane Creek Unit and Kane Springs Federal #16-1 SWD well and Fidelity Exploration & Production Company hereby accepts designation as successor operator.

(This space for State use only)

Transfer approved by: [Signature]  
Title: UIC Geologist

Approval Date: 1-29-08

Comments:

RECEIVED

JAN 11 2008

DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

6. LEASE DESIGNATION AND SERIAL NUMBER:  
**ML 44333**

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
**N/A**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME:  
**Kane Springs**

1. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER Water disposal well

8. WELL NAME and NUMBER:  
**Kane Springs 16-1**

2. NAME OF OPERATOR:  
**Fidelity Exploration and Production Company**

9. API NUMBER:  
**4301931341**

3. ADDRESS OF OPERATOR:  
2585 Heartland drive CITY **Sheridan** STATE **WY** ZIP **82801**

PHONE NUMBER:  
**(307) 675-4924**

10. FIELD AND POOL, OR WILDCAT:  
**Wildcat**

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: **960'** FSL: **1960'** FWL:

COUNTY: **Grand**

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: **SESW 16 25S 18E**

STATE:  
**UTAH**

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit In Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <b>6/22/2009</b>	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Acid clean out</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

6-22-2009- Fidelity Exploration and Production Company performed an Acid clean out on the above referenced well. The Max pressure was 452 psi, Average treating pressure 144 psi. Please see full report attached for more information.

NAME (PLEASE PRINT) Stephanie Masters

TITLE Operations Technician III

SIGNATURE 

DATE 6/23/2009

(This space for State use only)

**FIDELITY EXPLORATION &  
PRODUCTION  
1700 LINCOLN STE  
DENVER, CO 80203**

KANE SPRINGS FED. 16-1

Interval 1  
Grand County, Utah

Sales Order: 6737396

**Post Job Report**

For: CHARLIE HARRISON  
Date: Monday, June 22, 2009

Notice: Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

**HALLIBURTON**

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## **1.0 EXECUTIVE SUMMARY**

CHARLIE HARRISON  
FIDELITY EXPLORATION & PRODUCTION  
1700 LINCOLN STE  
DENVER , CO 80203

Dear CHARLIE HARRISON ,

Halliburton appreciates the opportunity to perform the stimulation treatment on the KANE SPRINGS FED. 16-1. A pre-job safety meeting was held where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined. Pump time was 61.23 min.

The proposed treatment for FIDELITY KANE SPRINGS FED. 16-1 consisted of:

- 5282 gal of FIELD SALT WATER.
- 500 gal of HCL HYDROCHLORIC ACID - SBM (341682).

The treatment actually pumped consisted of:

- 5490 gal of FIELD SALT WATER.
- 502 gal of HCL HYDROCHLORIC ACID - SBM (341682).

The average BH treating rate was 2.0 bpm and average WH pressure was 144 psi.  
The total liquid load to recover is 5995 gal.

Halliburton is strongly committed to quality control on location. Before and after each job all chemicals, proppants, and fluid volumes are measured to assure the highest level of quality control. Tank fluid analysis, crosslink time, and break tests are performed before each job in order to optimize the performance of the treatment fluids.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

ROB SEGERS

**2.0 WELL INFORMATION**

**2.1 Customer Information**

<b>Customer</b>	FIDELITY EXPLORATION & PRODUCTION
<b>Sales Order</b>	6737396
<b>Well Name</b>	KANE SPRINGS FED.
<b>Interval</b>	1
<b>Well Number</b>	16-1
<b>Start Time</b>	22-Jun-09 08:21:19
<b>County</b>	Grand
<b>State</b>	Utah
<b>UWI/API</b>	43-019-31341
<b>Lease Name</b>	FED.
<b>Country</b>	United States of America
<b>H2S Present</b>	Unknown
<b>CO2 Present</b>	Unknown
<b>Customer Representative</b>	CHARLIE HARRISON
<b>Halliburton Representative</b>	ROB SEGERS

**2.2 Pipe Information**

Equipment	Top MD ft	Bottom MD ft	OD in	ID in	Grade	Weight lb/ft
Surface Pipe	0.0	100.0	2.620	1.870		
Tubing	0.0	1463.0	2.875	2.259	N-80	8.70
Casing	1463.0	1530.0	4.500	4.000	N-80	11.60

**2.3 Perforation Intervals**

Top MD ft	Bottom MD ft	Number of Shots	Perf Density spf
1490.0	1520.0	50	1.6

**2.4 Initial Fluid Position Pressures**

<b>Expected Bottom Hole Pressure</b>	5000.000	psi
<b>Reservoir Pressure</b>	349.999	psi
<b>Closed-In WHP</b>	0.000	psi
<b>Fluid Free to Flow into Formation</b>	Yes	
<b>Surface Lines Full</b>	No	
<b>Fluid in Tubing</b>	Brine	
<b>Top of Fluid Depth</b>	0.0	ft

**3.0 PUMPING SCHEDULE**

**3.1 Designed Pumping Schedule**

Stage Number	Description	Flow Path	Fluid System	Clean Volume gal	Slurry Volume gal	Rate Stage Start bpm	Rate Stage End bpm
1	Load Well	In	FIELD SALT WATER	420	420	1.0	5.0
2	Acid	In	HCL HYDROCHLORIC ACID - SBM (341682)	500	500	1.0	1.0
3	Displacement	In	FIELD SALT WATER	2431	2431	1.0	5.0
4	Shut-In	In		0	0	0.0	0.0
5	Displacement	In	FIELD SALT WATER	2431	2431	1.0	5.0
Total				5782	5782		

**3.2 Designed Pumping Schedule (continued)**

Stage Number	Description	Stage Time min
1	Load Well	3.33
2	Acid	11.90
3	Displacement	19.29
4	Shut-In	16.40
5	Displacement	19.29
Total		70.23

## 4.0 ACTUAL STAGE SUMMARY

### 4.1 Stage Summary

Stage Number	Start Time	Max Treating Pressure psi	Avg Treating Pressure psi	Max Slurry Rate bpm	Avg Slurry Rate bpm	Avg Clean Rate bpm	Slurry Volume gal
1	09:20:16	76	23	1.4	1.1	1.1	423
2	09:29:31	122	103	1.1	1.0	1.0	502
3	09:41:47	452	171	5.9	2.6	2.6	2449
4	10:12:21	0	-22	2.4	0.9	0.9	3
5	10:19:37	429	199	6.0	3.5	3.5	2618
Total							5995

Stage Number	Start Time	Clean Volume gal	Avg HHP hp
1	09:20:16	423	1
2	09:29:31	502	2
3	09:41:47	2449	11
4	10:12:21	3	0
5	10:19:37	2618	17
Total		5995	

**5.0 PERFORMANCE HIGHLIGHTS**

**5.1 Job Summary**

<b>Start Time</b>	22-Jun-09 09:20:16	
<b>End Time</b>	22-Jun-09 10:41:25	
<b>Time</b>	81.14	min
<b>Pump Time</b>	61.23	min
<b>Max Treating Pressure</b>	452	psi
<b>Avg Treating Pressure</b>	144	psi
<b>Avg Clean Rate</b>	2.3	bpm
<b>Clean Volume</b>	5995	gal
<b>Max Slurry Rate</b>	6.0	bpm
<b>Avg Slurry Rate</b>	2.3	bpm
<b>Slurry Volume</b>	5995	gal
<b>Max WH Rate</b>	6.0	bpm
<b>Avg WH Rate</b>	2.3	bpm
<b>WH Volume</b>	5981	gal
<b>Avg HHP</b>	8	hp
<b>BH Max Treating Pressure</b>	795	psi
<b>BH Avg Treating Pressure</b>	717	psi
<b>BH Max Rate</b>	6.0	bpm
<b>BH Avg Rate</b>	2.0	bpm
<b>BH Slurry Volume</b>	6031	gal
<b>BH Clean Volume</b>	6031	gal
<b>Load to Recover</b>	5995	gal

## 5.2 Job Stage Log

Time	Description	Comment	Backside Pressure psi	Treating Pressure psi	Clean Rate bpm	Job Clean Vol gal	Stage Clean Vol gal
22-Jun-09 09:20:17	Stage 1	Load Well	0	-9	0.3	11	11
09:29:32	Stage 2	Acid	0	76	1.1	423	423
09:41:47	Stage 3	Displacement	0	79	0.8	925	502
10:12:21	Stage 4	Shut-In	0	-22	0.0	3375	2449
10:19:37	Stage 5	Displacement	0	-21	2.4	3377	3

**5.3 Job Event Log**

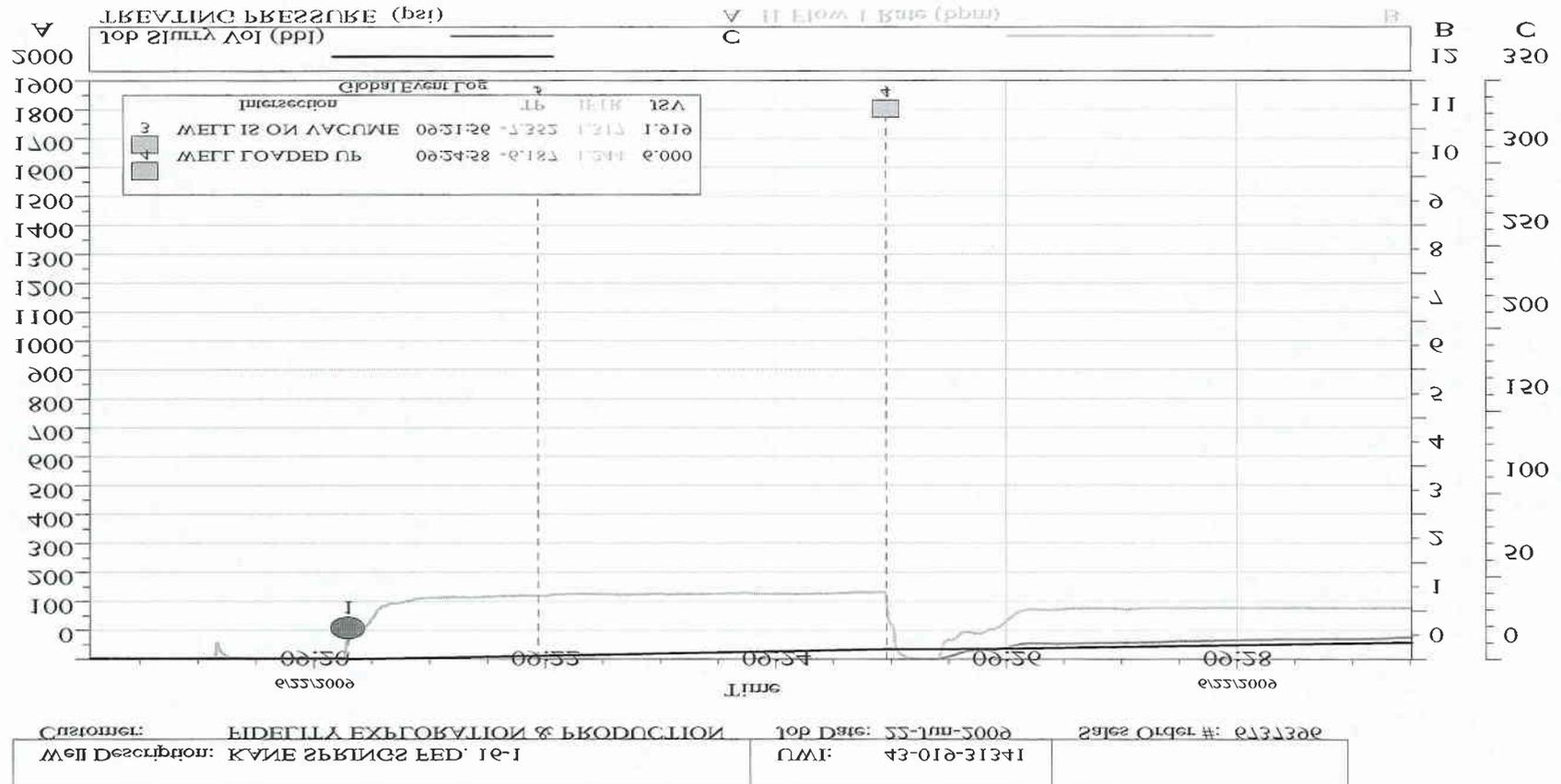
Stage Number	Event Number	Time	Description	Comment	Backside Pressure psi	Treating Pressure psi	Clean Rate bpm	Job Clean Vol gal	Stage Clean Vol gal
	1	22-Jun-09 08:42:58	Start Job	Starting Job					
		08:42:58	Next Treatment	Treatment Interval 1					
	2	09:03:06	Pressure Test		0	1568	0.0	8	8
1		09:20:17	Stage 1	Load Well	0	-9	0.3	11	11
	3	09:21:56	Other	WELL IS ON VACUME	0	-7	1.3	80	80
	4	09:24:57	Other	WELL LOADED UP	0	-6	1.4	252	252
2		09:29:32	Stage 2	Acid	0	76	1.1	423	423
	5	09:37:44	Spot Acid	SLOW TO 0.5 BPM	0	67	0.8	794	371
3		09:41:47	Stage 3	Displacement	0	79	0.8	925	502
	6	09:50:39	Other	STEP UP RATE TO 5 BPM	0	138	1.9	1222	297
	7	09:51:19	Other	ALL ACID AWAY	0	216	3.6	1301	376
	8	09:52:07	Other	MAX PSI REACHED	0	404	5.2	1423	498
	9	09:55:19	Shutdown		0	359	4.8	1946	1021
	10	10:08:59	Shut-In Pressure @ 5 Minutes		0	-22	0.0	3375	2449
4		10:12:21	Stage 4	Shut-In	0	-22	0.0	3375	2449
	11	10:13:56	Shut-In Pressure @ 10 Minutes		0	-23	0.0	3375	0
	12	10:19:08	Shut-In Pressure @ 15 Minutes		0	-23	0.0	3375	0
5		10:19:37	Stage 5	Displacement	0	-21	2.4	3377	3
	13	10:21:14	Other	PRESSURE SPIKE	0	305	4.7	3597	220
	14	10:33:32	Shutdown		0	324	4.4	5816	2438
	15	10:34:18	Other	CLEAN UP PUMP TO WELL	0	-23	0.9	5834	2457
	16	10:41:25	End Job	Ending Job	0	-11	0.0	5995	2618

**5.4 ISIP**

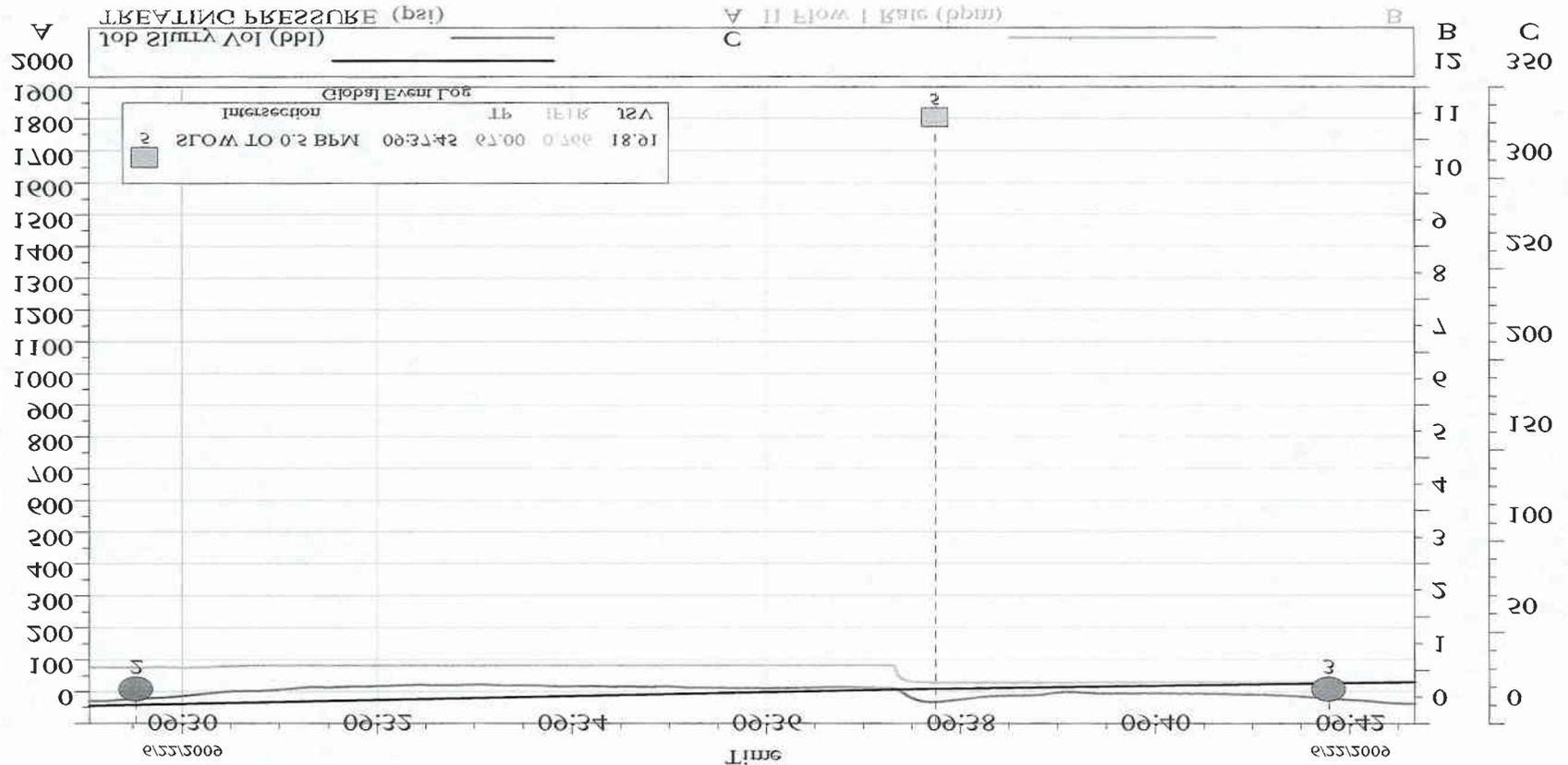
Time	Description	Treating Pressure psi
10:08:59	Shut-In Pressure @ 5 Minutes	-22
10:13:56	Shut-In Pressure @ 10 Minutes	-23
10:19:08	Shut-In Pressure @ 15 Minutes	-23

6.0 ATTACHMENTS

6.1 ACID CLEAN OUT KANE SPRINGS 16-1 LOAD WELL

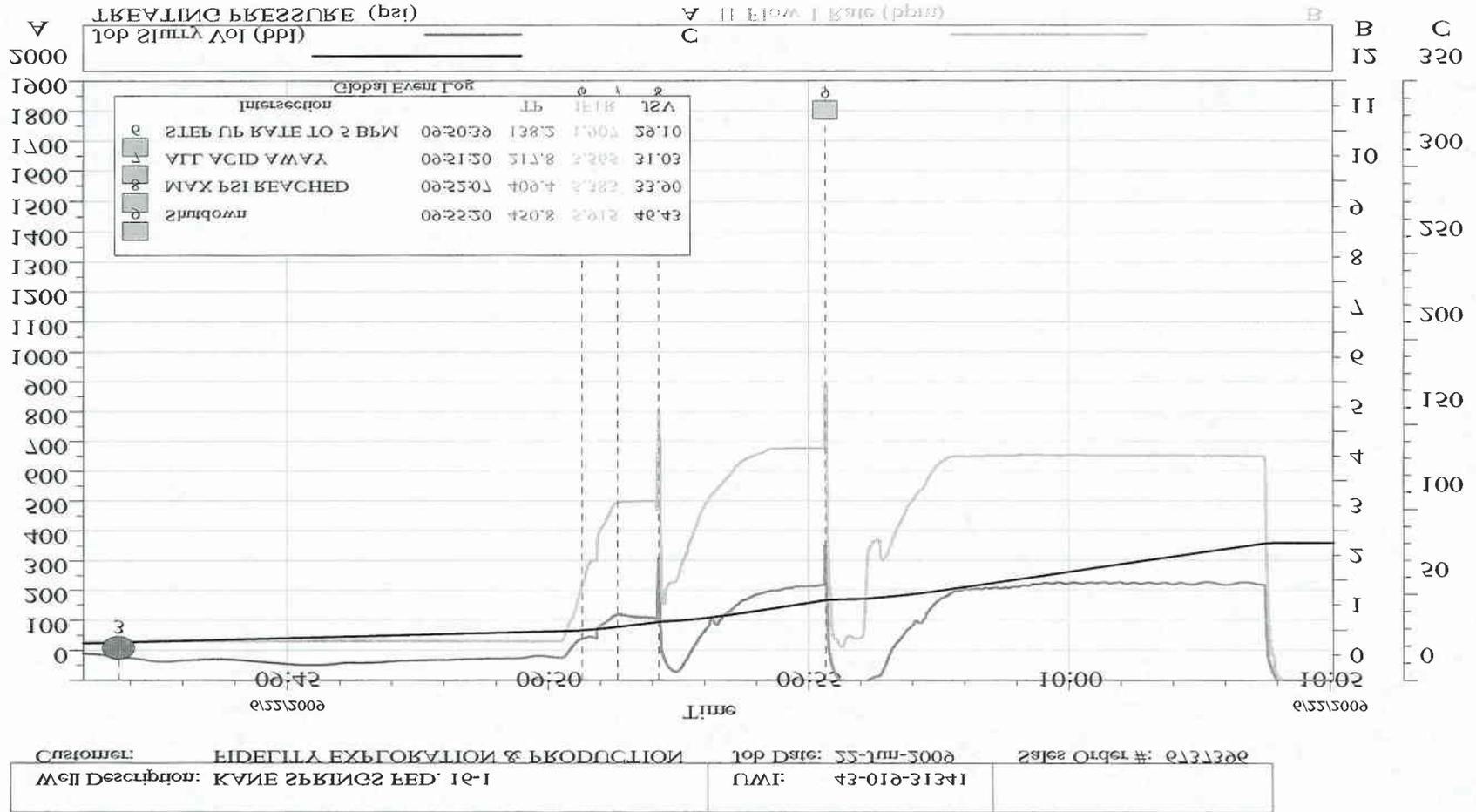


## 6.2 ACID CLEAN OUT KANE SPRINGS 16-1 PUMP ACID

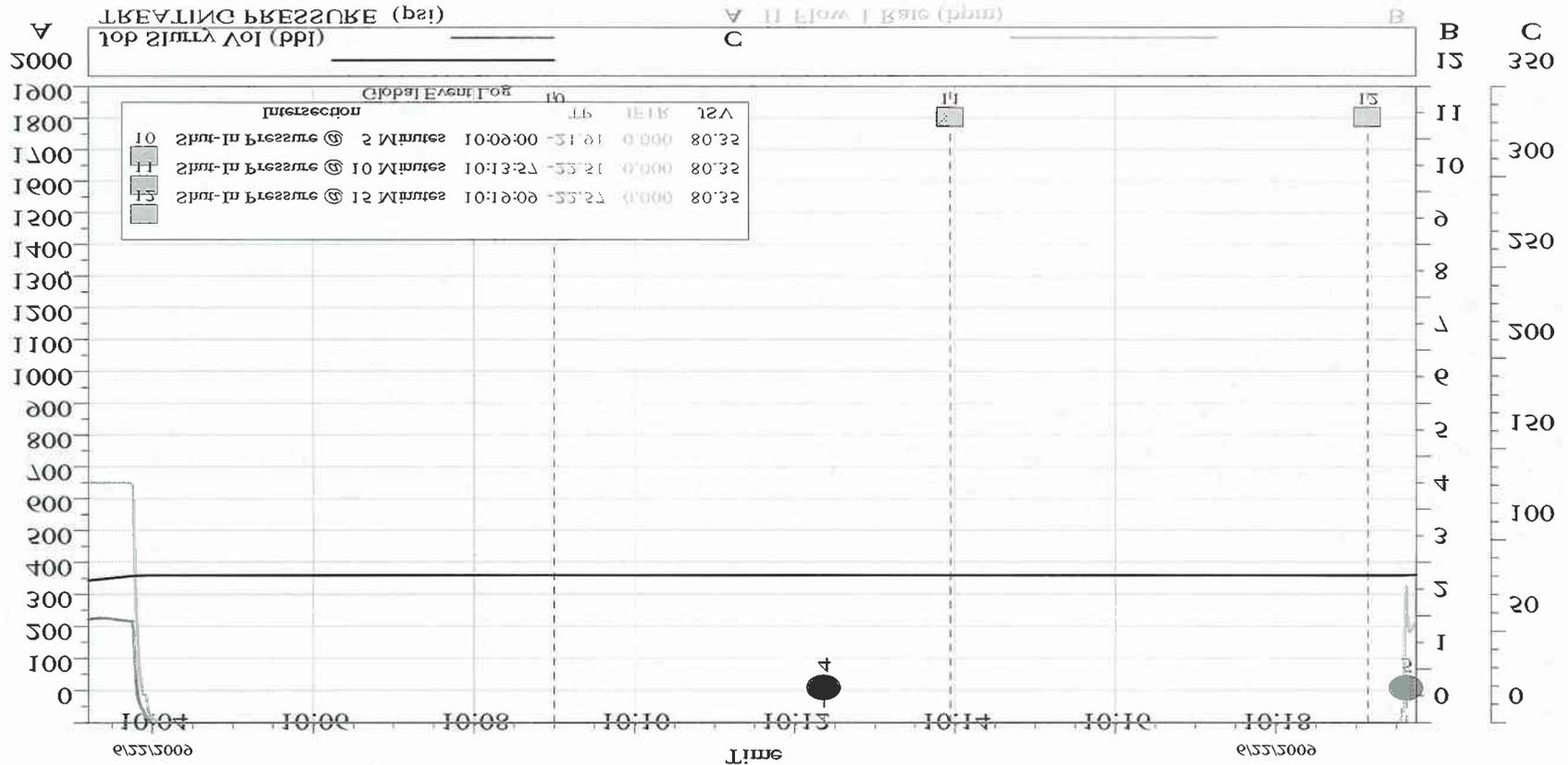


Customer: FIDELITY EXPLORATION & PRODUCTION	Job Date: 22-Jun-2009	Sales Order #: 0731300
Well Description: KANE SPRINGS FED. 16-1	UWI: 43-010-31341	

## 6.3 ACID CLEAN OUT KANE SPRINGS 16-1 PUMP FLUSH

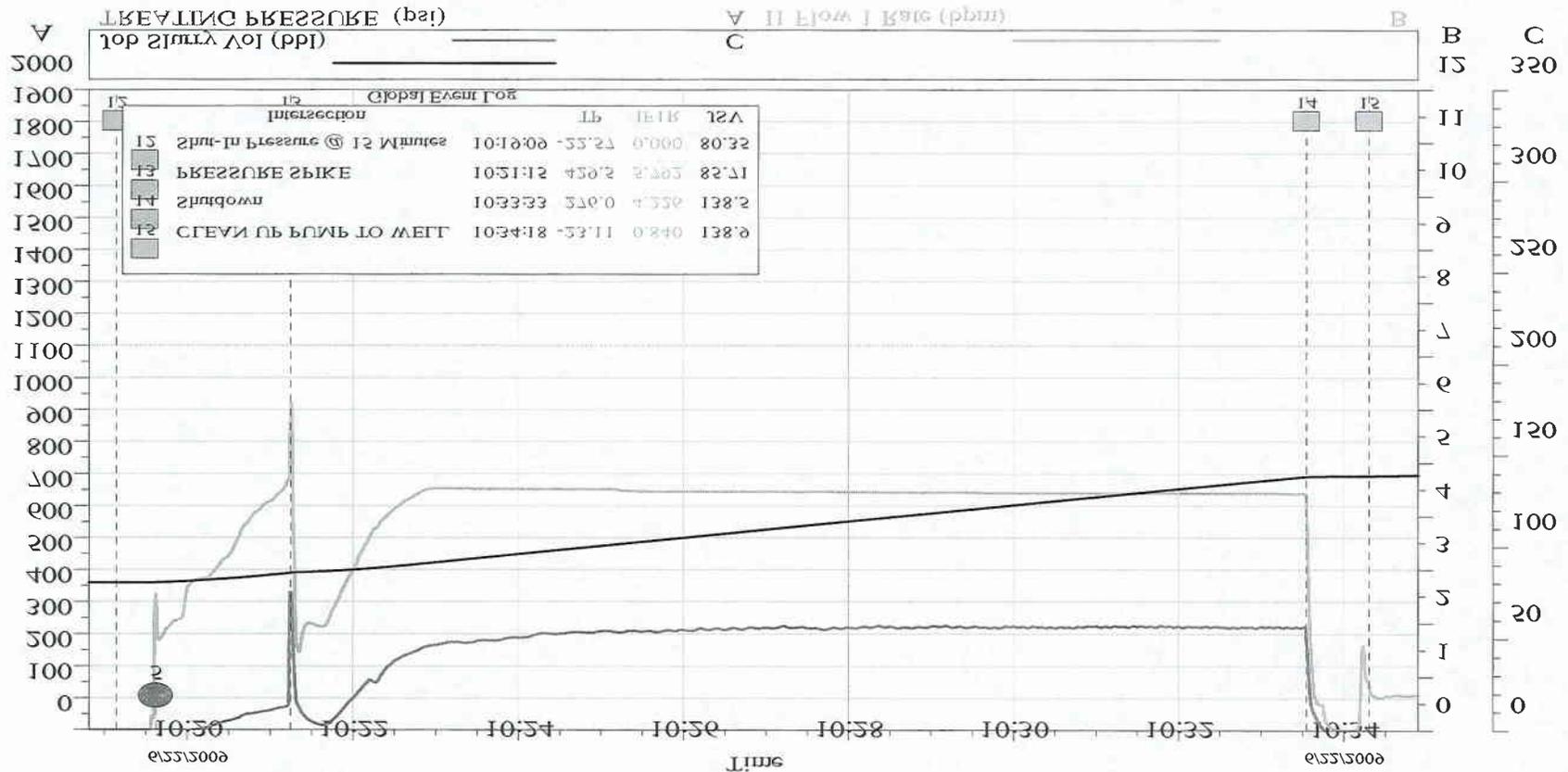


6.4 ACID CLEAN OUT KANE SPRINGS 16-1 5-10-15 MIN WAIT



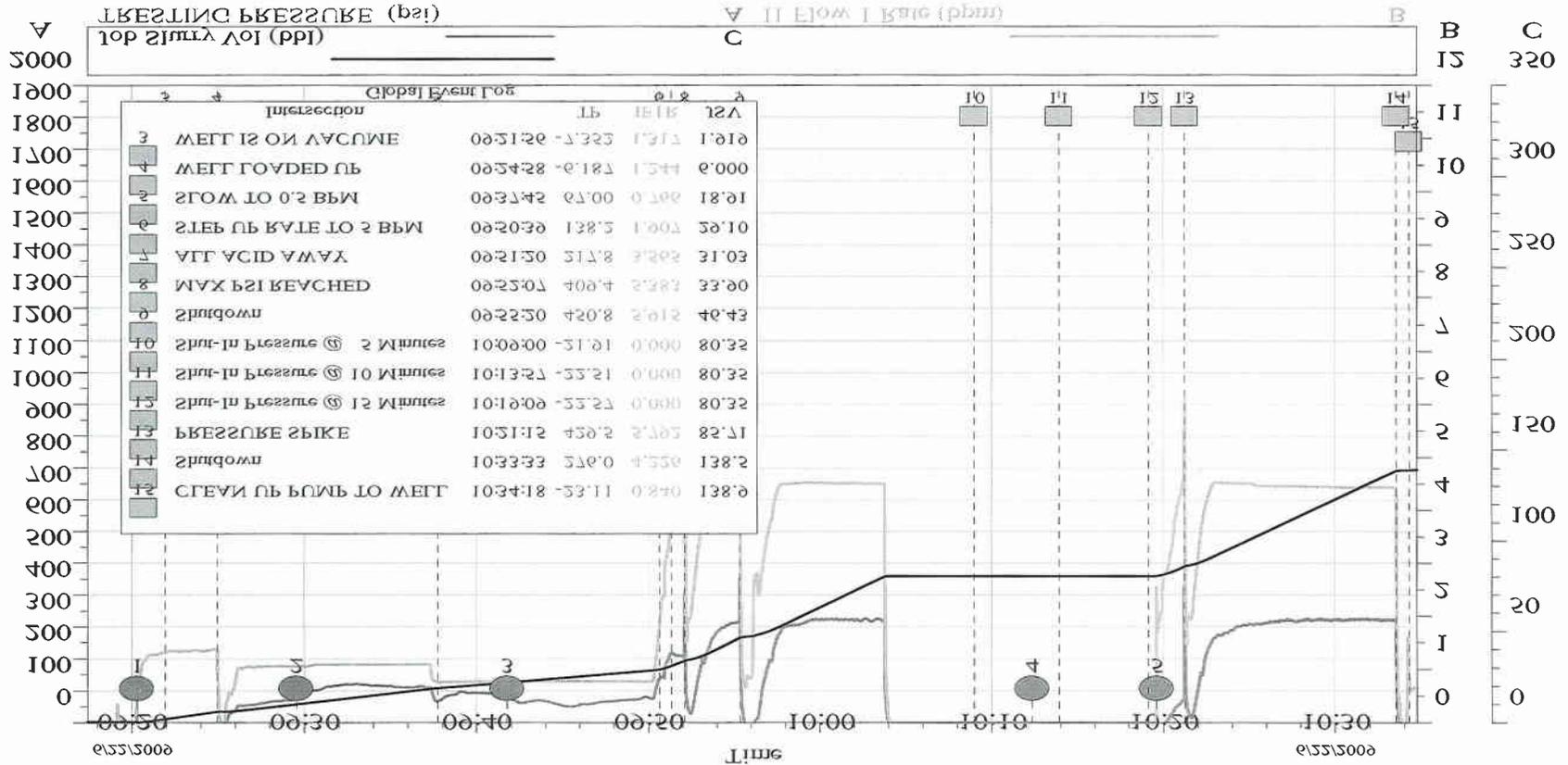
Customer: FIDELITY EXPLORATION & PRODUCTION	Job Date: 22-Jun-2009	Sales Order #: 0131300
Well Description: KANE SPRINGS FED. 16-1	UWI: 43-010-31341	

## 6.5 ACID CLEAN OUT KANE SPRINGS 16-1 PUMP OVER FLUSH



Customer:	FIDELITY EXPLORATION & PRODUCTION	Job Date:	22-Jun-2009	Sales Order #:	031320
Well Description:	KANE SPRINGS FED. 16-1	UWI:	43-010-31341		

6.6 ACID CLEAN OUT KANE SPRINGS 16-1 COMPLETE JOB



Customer: FIDELITY EXPLORATION & PRODUCTION	Job Date: 05-11-2009	Sales Order #: 0232200
Well Description: KANE SPRINGS FED. 16-1	UWI: 43-010-31341	



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

Feb 13, 2012

Fidelity E&P Company  
1700 Lincoln ST STE 2800  
Denver, CO 80203

25S 18E 16

SUBJECT: Pressure Test for Mechanical Integrity, Kane Springs 16-1, Grand County, Utah:

To Whom It May Concern:

The Underground Injection Control Program, which the Division of Oil, Gas and Mining (DOGM) administers in Utah, requires that all Class II injection wells demonstrate mechanical integrity. Rule R649-5-5.3 of the Oil and Gas Conservation General Rules requires that the casing-tubing annulus above the packer be pressure tested at a pressure equal to the maximum authorized injection pressure or 1,000 psi, whichever is lesser, provided that no test pressure is less than 300 psi. This test shall be performed at least every five-year period beginning October 1982. The following wells now require a current test:

Kane Springs 16-1                      4301931341

Please make arrangements and ready wells for testing during the week of March 19<sup>th</sup> 2012, as outlined below:

1. Operator must furnish connections, and accurate pressure gauges, hot oil truck (or other means of pressuring annulus), along with personnel to assist in opening valves, etc.
2. The casing-tubing annulus shall be filled prior to the test date to expedite testing, as each well will be required to hold pressure for a minimum of 15 minutes.
3. If mechanical difficulties or workover operations make it impossible for the well(s) to be tested on this date the test(s) may be rescheduled.
4. Company personnel should meet a DOGM representative(s) at the field office or other location as negotiated.



Page 2  
February 13, 2012  
Fidelity E&P Company

5. All bradenhead valves with exception of the tubing on the injection well(s) must be shut-in 24 hours prior to testing.

Please contact me at (435) 820-0862 to arrange a meeting time and place or to negotiate a different date, if the date(s) specified is unacceptable.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bart Kettle', written over a horizontal line.

Bart Kettle  
Environmental Scientist

bk/dj/js

cc: Dan Jarvis, Operations Manager  
Well File

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: ML-44333
1. TYPE OF WELL Water Disposal Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: FIDELITY E&P COMPANY	7. UNIT or CA AGREEMENT NAME: CANE CREEK
3. ADDRESS OF OPERATOR: 1801 California St. Ste 2500 , Denver, CO, 80202	8. WELL NAME and NUMBER: KANE SPRINGS 16-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0960 FSL 1960 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESW Section: 16 Township: 25.0S Range: 18.0E Meridian: S	9. API NUMBER: 43019313410000
9. FIELD and POOL or WILDCAT: WILDCAT	COUNTY: GRAND
9. FIELD and POOL or WILDCAT: WILDCAT	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 2/10/2015	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Conduct a wellbore cleanout and re-perforate in the current injection interval of 1490 to 1520 feet. While performing this work a new injection breakdown test will be conducted

**Approved by the**  
**Feb Davis**, 2015  
**Oil, Gas and Mining**

Date: \_\_\_\_\_  
 By: 

<b>NAME (PLEASE PRINT)</b> Frances MacDonald	<b>PHONE NUMBER</b> 720 917-3026	<b>TITLE</b> Environmental Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/3/2015	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-44333	
<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>7. UNIT or CA AGREEMENT NAME:</b> CANE CREEK	
<b>8. WELL NAME and NUMBER:</b> KANE SPRINGS 16-1	
<b>9. API NUMBER:</b> 43019313410000	
<b>9. FIELD and POOL or WILDCAT:</b> WILDCAT	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0960 FSL 1960 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 16 Township: 25.0S Range: 18.0E Meridian: S	
<b>3. ADDRESS OF OPERATOR:</b> 1801 California St. Ste 2500 , Denver, CO, 80202	
<b>PHONE NUMBER:</b> 720 917-3026 Ext	
<b>2. NAME OF OPERATOR:</b> FIDELITY E&P COMPANY	
<b>1. TYPE OF WELL</b> Water Disposal Well	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <b>5/27/2015</b>	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input style="width: 50px;" type="text" value="MIT"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Please find the attached MIT results for the captioned well.

**Accepted by the  
 Utah Division of  
 Oil, Gas and Mining**

Date: July 06, 2015

By: 

<b>NAME (PLEASE PRINT)</b> Renee Kendrick	<b>PHONE NUMBER</b> 720 956-5752	<b>TITLE</b> Project Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/2/2015	

	Chassis	Lower Module	Upper Module	BARO Module	Left Scale	Right Scale
Serial Number	259109	258731			258731	
Model	NV	15KPSI				
Message Store	CAMERON SURFACE SYSTEMS					
Userspan		1.00000				
Offset						
Datatype					Lower	
Units		PSI G			PSI G	
Tare						
Average						
User Factor						
User Offset						
User Resolution						
Firmware Version	R080014	R090007				
Calibration Due		24-Aug-13				
Run Index	6					
Run Start Time				27-May-15/15:51:57		
Run Duration				25 minutes 45 seconds		
Run Tag				CCU 16-1 MIT		
Logging Interval	1.0					

Data Points			
Point #	Time	Left - PSI G	
1	00:00:00.0	0	
2	00:00:01.0	0	
3	00:00:02.0	0	
4	00:00:03.0	0	
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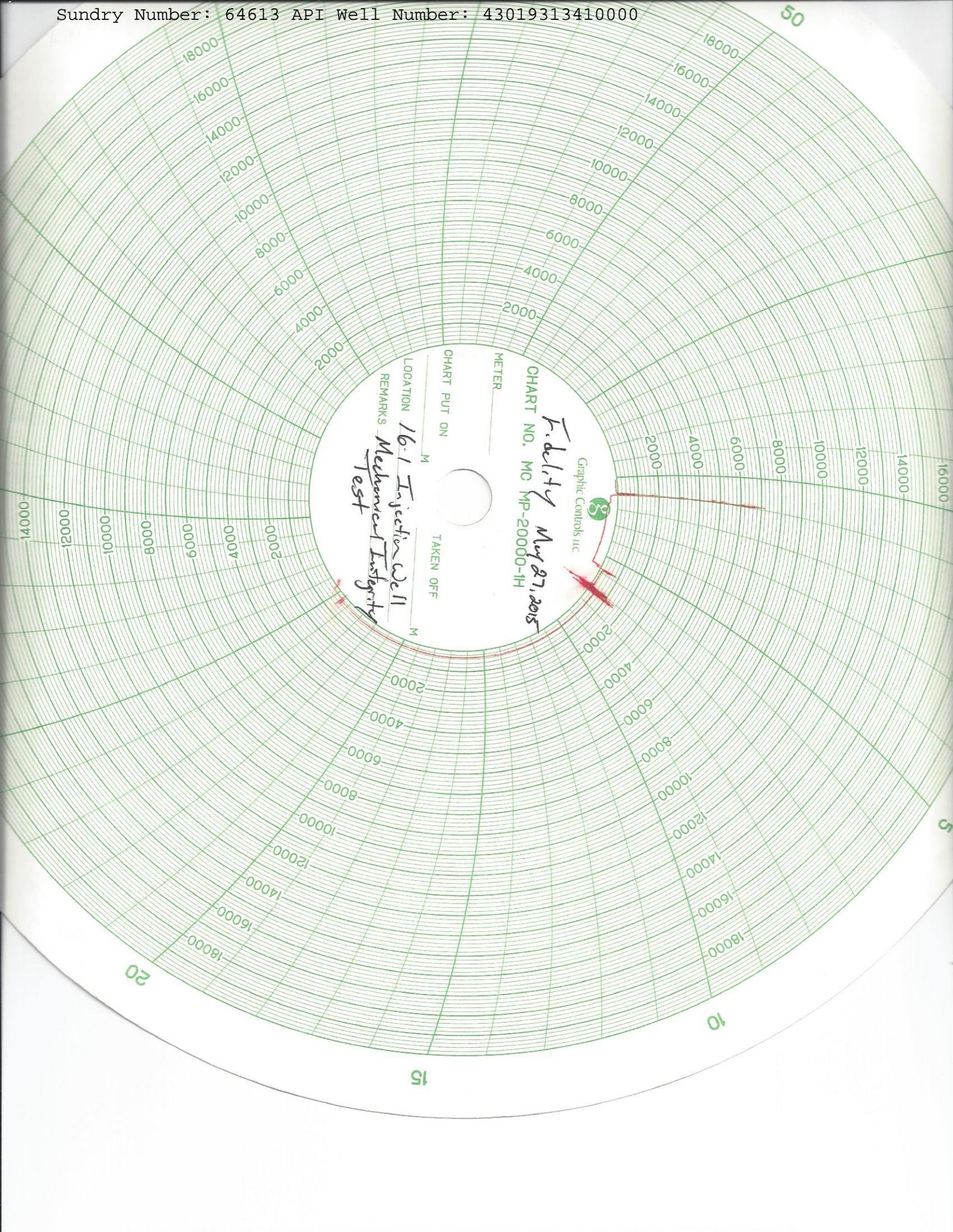
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Graphic Controls LLC

CHART NO. MC MP-20000-1H  
Fidelity May 27, 2015

METER

CHART PUT ON

M

TAKEN OFF

M

LOCATION

16-1 Injection Well

REMARKS

Mechanical Integrity Test

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<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>	
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	
<b>1. TYPE OF WELL</b> Water Disposal Well	<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML-44333
<b>2. NAME OF OPERATOR:</b> FIDELITY E&P COMPANY	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 1801 California St. Ste 2500 , Denver, CO, 80202	<b>7. UNIT or CA AGREEMENT NAME:</b> CANE CREEK
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0960 FSL 1960 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 16 Township: 25.0S Range: 18.0E Meridian: S	<b>8. WELL NAME and NUMBER:</b> KANE SPRINGS 16-1
<b>PHONE NUMBER:</b> 720 917-3026 Ext	<b>9. API NUMBER:</b> 43019313410000
<b>9. FIELD and POOL or WILDCAT:</b> WILDCAT	<b>COUNTY:</b> GRAND
	<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/15/2015	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Injection rate increase"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Fidelity respectfully requests a modification to the Kane Springs Unit 16-1 salt water disposal well permit UIC-208 (API #43-019-31341). The active permit currently allows a maximum injection pressure of 400 psi and a maximum injection rate of 800 BWPD into the Cutler Formation. Fidelity requests that permit UIC-208 be modified to include a maximum injection rate of 8,500 bbls/day at the maximum injection pressure of 400 psi. The modification request is based on the following. (see attachment)

Approved by the  
 Utah Division of  
 Oil, Gas and Mining

Date: \_\_\_\_\_

By:

<b>NAME (PLEASE PRINT)</b> Renee Kendrick	<b>PHONE NUMBER</b> 720 956-5752	<b>TITLE</b> Project Specialist
<b>SIGNATURE</b> N/A	<b>DATE</b> 12/15/2015	

### **Kane Springs Unit 16-1 Injection Rate Sundry Additional Information**

Between February 25, 2015 and March 3, 2015, well work was performed to enhance injection capability of the facility. Pertinent well work included:

- Removal of the existing injection tubulars and packer;
- Circulation and complete recovery of a solvent wash to remove accumulated sludge and scaling;
- Re-perforation of the permitted injection interval (1490' to 1520');
- Resetting of the injection tubing and packer;
- Pressure testing to ensure wellbore integrity (A second and formal MIT was performed with DOGM in attendance on May 27, 2015);
- Step-rate injectability testing of the target formation.

Injection testing (attached) of the permitted formation was performed on March 1, 2015. The test indicates that the formation will allow injection rates greater than 9,000 bbls/day and not exceed the permitted injection pressure limit of 400 psi.

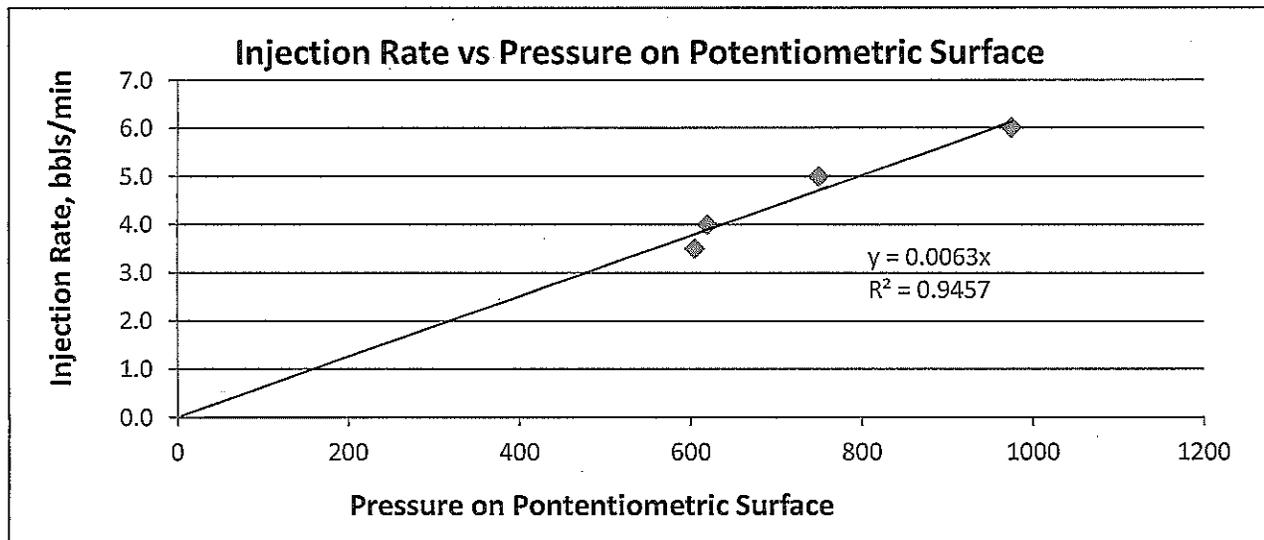
Accordingly, Fidelity requests that permit UIC-208 be modified to include a maximum injection rate of 8,500 bbls/day at the maximum injection pressure of 400 psi.

**Injection Test KSF 16-1, 3/1/2015**

Step Start Time	Step Stop Time	inj: bbls/min	Step inj: bbls	Cum bbls	Injection Pressure	bbls/day	PSI @1200 <sup>1,2</sup>
15:15	15:35	0.5	10	10		720	
15:35	15:45	1.0	10	20		1,440	
15:45	15:55	1.5	15	35		2,160	
15:55	16:05	2.0	20	55		2,880	
16:05	16:15	3.0	30	85		4,320	
16:15	16:25	3.5	35	120	5	5,040	605
16:25	16:35	4.0	40	160	20	5,760	620
16:35	16:45	5.0	50	210	150	7,200	750
16:45	16:55	6.0	60	270	375	8,640	975

<sup>1</sup> Density of injected water (250,000 ppm TDS) 9.62 lbs/gal 0.5 psi/ft

<sup>2</sup> Potentiometric surface elevation was found to be at 3,967' in the 16-1. This is the approximate elevation of the Colorado and Green rivers. This is at 1,200' measured depth in the 16-1 borehole. Assuming no injection will occur until pressure is exerted on this surface, it is used as a datum for pressure. Once the borehole is full of water 600 psi will be exerted on the potentiometric surface



**Calculated Injection Rate vs Injection Pressure**

Water Level in BH	<sup>3</sup> inj: bbls/min		Injection Pressure	bbls/day	PSI @1200
0	6.30		400	9,072	1,000
0	5.99		350	8,618	950
0	5.67		300	8,165	900
0	5.36		250	7,711	850
0	5.04		200	7,258	800
0	4.73		150	6,804	750
0	4.41		100	6,350	700
0	4.10		50	5,897	650
0	3.78	w/ no inj. pres. @ surf	0	5,443	600
200	3.15		0	4,536	500
400	2.52		0	3,629	400
600	1.89		0	2,722	300
800	1.26		0	1,814	200
1000	0.63		0	907	100
1200	0.00		0	-	-

<sup>3</sup>b = 0.0063 bbls/min/psi

**Current Permitted Injection Rate not to exceed 400 psi at surface and 800 bbls/day**  
0.56 bbls/min 800 bbls/day

**Sundry removes 800 bbls/day max injection rate, allowing for whatever rate as long as surface treating pressure does exceed 400 psi.**

Division of Oil, Gas and Mining  
 Operator Change/Name Change Worksheet-for State use only

Effective Date: 3/1/2016

<b>FORMER OPERATOR:</b> Fidelity E&P Company N3155 1801 Californina Street, Suite 2500 Denver, CO 80202	<b>NEW OPERATOR:</b> Wesco Operating, Inc. N4030 PO Box 1650 Casper, WY 82602
<b>CA Number(s):</b>	<b>Unit(s):</b> Cane Creek Threemile

**WELL INFORMATION:**

Well Name	Sec	TWN	RNG	API	Entity	Mineral	Surface	Type	Status
See Attached List									

**OPERATOR CHANGES DOCUMENTATION:**

- Sundry or legal documentation was received from the **FORMER** operator on: 4/12/2016
- Sundry or legal documentation was received from the **NEW** operator on: 4/12/2016
- New operator Division of Corporations Business Number: 8742016-0143

**REVIEW:**

- Surface Agreement Sundry from **NEW** operator on Fee Surface wells received on: 4/12/2016
- Receipt of Acceptance of Drilling Procedures for APD on: 4/12/2016
- Reports current for Production/Disposition & Sundries: 4/19/2016
- OPS/SI/TA well(s) reviewed for full cost bonding: 4/19/2016
- UIC5 on all disposal/injection/storage well(s) approved on: 4/13/2016
- Surface Facility(s) included in operator change: Blue Hills Gas Plant  
Dead House Lateral Pipeline  
Dubinky Booster Station  
Long Canyon Facility
- Inspections of PA state/fee well sites complete on (only upon operators request): N/A

**NEW OPERATOR BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: UTB0000685
- Indian well(s) covered by Bond Number: N/A
- State/fee well(s) covered by Bond Number(s): RLB0016443

**DATA ENTRY:**

- Well(s) update in the **OGIS** on: 4/21/2016 ✓
- Entity Number(s) updated in **OGIS** on: 4/21/2016
- Unit(s) operator number update in **OGIS** on: 4/21/2016
- Surface Facilities update in **OGIS** on: 4/21/2016
- State/Fee well(s) attached to bond(s) in **RBDMS** on: 4/21/2016
- Surface Facilities update in **RBDMS** on: 4/21/2016

**LEASE INTEREST OWNER NOTIFICATION:**

- The **NEW** operator of the Fee (Mineral) wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

**COMMENTS:**

From: Fidelity Exploration Production Company N3155

To: Wesco Operating, Inc. N4030

Effective: 3/1/2016

Well Name	Section	TWN	RNG	API Numner	Entity	Mineral	Surface	Type	Status	Unit
KANE SPRINGS 16-1	16	250S	180E	4301931341	11484	State	State	WD	A	CANE CREEK
CANE CREEK UNIT 2-2-25-18	2	250S	180E	4301950044		State	State	OW	APD	CANE CREEK
Cane Creek Unit 25-1-25-19	25	250S	190E	4301950048		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 6-1-25-19	6	250S	190E	4301950052		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 29-1-25-19	29	250S	190E	4301950053		Federal	Federal	OW	APD	CANE CREEK
Cane Creek 10-1-25-19	10	250S	190E	4301950054		Federal	Federal	OW	APD	
Cane Creek Unit 30-1-25-19	30	250S	190E	4301950055		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 19-2-26-20	19	260S	200E	4301950056		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 14-1-25-19	14	250S	190E	4301950057		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 2-3-25-18	2	250S	180E	4301950058		Federal	State	OW	APD	CANE CREEK
Cane Creek Unit 16-3-25-18	16	250S	180E	4301950059		Federal	State	OW	APD	CANE CREEK
Cane Creek Unit 19-1-25-19	19	250S	190E	4301950060		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 32-2-25-19	32	250S	190E	4301950061		State	State	OW	APD	CANE CREEK
Cane Creek Unit 17-1-25-19	17	250S	190E	4301950062		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 16-4-25-18	16	250S	180E	4301950063		Federal	State	OW	APD	CANE CREEK
Cane Creek Unit 2-4-25-18	2	250S	180E	4301950064		Federal	State	OW	APD	CANE CREEK
Cane Creek Unit 5-1-25-18	5	250S	180E	4301950065		Federal	Federal	OW	APD	CANE CREEK
8-2-26-20	8	260S	200E	4301950068		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 19-3-26-20	19	260S	200E	4301950069		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 21-1-25-19	21	250S	190E	4301950070		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 12-2-26-19	12	260S	190E	4301950071		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 26-4-25-19	26	250S	190E	4301950072		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 21-1-25-18	21	250S	180E	4301950073		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 9-1-25-18	9	250S	180E	4301950074		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 7-1-25-19	7	250S	190E	4301950075		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 5-2-25-18	5	250S	180E	4301950076		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 7-1-25-18	7	250S	180E	4301950077		Federal	Federal	OW	APD	CANE CREEK
Cane Creek Unit 13-1-25-18	13	250S	180E	4301950078		Federal	Federal	OW	APD	CANE CREEK
Three Mile Unti 12-3-29-21	12	290S	210E	4303750070		Federal	Federal	OW	APD	THREEMILE
Three Mile Unit 16-2-29-22	16	290S	220E	4303750071		Federal	State	OW	APD	THREEMILE
Cane Creek Unit 7-2-26-20	7	260S	200E	4301950051	19706	Federal	Federal	OW	OPS	CANE CREEK
THREEMILE 16-17	16	290S	220E	4303750003	17984	State	State	OW	OPS	THREEMILE
Three Mile Unit 12-2-29-21	12	290S	210E	4303750069	19646	Federal	Federal	OW	OPS	THREEMILE
KANE SPRINGS FED 27-1	27	250S	190E	4301931310	14505	Federal	Federal	OW	P	CANE CREEK
KANE SPRINGS FED 19-1A	19	260S	200E	4301931324	14505	Federal	Federal	OW	P	CANE CREEK
KANE SPRINGS FED 10-1	10	250S	180E	4301931331	14509	Federal	Federal	OW	P	CANE CREEK
KANE SPRINGS FED 25-19-34-1	34	250S	190E	4301931334	14505	Federal	Federal	OW	P	CANE CREEK
CANE CREEK 2-1	2	260S	190E	4301931396	14505	State	State	OW	P	CANE CREEK
CANE CREEK UNIT 12-1	12	260S	190E	4301950009	14505	Federal	Federal	OW	P	CANE CREEK
CANE CREEK UNIT 7-1	7	260S	200E	4301950010	18923	Federal	Federal	OW	P	CANE CREEK
CANE CREEK UNIT# 26-2	26	250S	190E	4301950011	14505	Federal	Federal	OW	P	CANE CREEK
CANE CREEK UNIT #18-1	18	260S	200E	4301950012	14505	Federal	Federal	OW	P	CANE CREEK
CANE CREEK U #13-1	13	260S	190E	4301950014	14505	Federal	Federal	OW	P	CANE CREEK
CANE CREEK UNIT 26-3	26	250S	190E	4301950019	14505	Federal	Federal	OW	P	CANE CREEK
CANE CREEK UNIT 28-2	28	250S	190E	4301950020	18681	Federal	Federal	OW	P	
Cane Creek Unit 17-1	17	260S	200E	4301950028	18980	Federal	Federal	OW	P	CANE CREEK
Cane Creek Unit 36-1	36	250S	190E	4301950030	14505	State	State	OW	P	CANE CREEK
Cane Creek Unit 36-2H	36	250S	190E	4301950033	14505	State	State	OW	P	CANE CREEK
Cane Creek Unit 24-2H	24	260S	190E	4301950034	19342	Federal	Federal	OW	P	CANE CREEK
Cane Creek Unit 36-3H	36	250S	190E	4301950035	19528	State	State	OW	P	CANE CREEK
CANE CREEK UNIT 2-1-25-18	2	250S	180E	4301950036	19343	Federal	State	OW	P	CANE CREEK
Cane Creek Unit 32-1-25-19	32	250S	190E	4301950037	19396	State	State	OW	P	
Cane Creek Unit 28-3	28	250S	190E	4301950045	19767	Federal	Federal	OW	P	CANE CREEK
Cane Creek 32-1-25-20	32	250S	200E	4301950049	19588	State	State	OW	P	
HATCH POINT 1	14	290S	210E	4303731658	11356	Federal	Federal	OW	P	
THREEMILE 43-18H	18	290S	220E	4303731857	17276	Federal	Federal	OW	P	
LONG CANYON 1	9	260S	200E	4301915925	674	Federal	Federal	OW	S	
CANE CREEK 1-1	1	260S	190E	4301931446	14505	Federal	Federal	OW	S	CANE CREEK

From: Fidelity Exploration Production Company N3155

To: Wesco Operating, Inc. N4030

Effective: 3/1/2016

CANE CREEK 24-1	24	260S	190E	4301931447	14505	Federal	Federal	OW	S	CANE CREEK
CANE CREEK 8-1	8	260S	200E	4301931449	16464	Federal	Federal	OW	S	CANE CREEK
Cane Creek Unit 18-2	18	260S	200E	4301950027	14505	Federal	Federal	OW	S	CANE CREEK
Cane Creek Unit 17-2	17	260S	200E	4301950032	14505	Federal	Federal	OW	S	CANE CREEK
Cane Creek 36-1-25-18	36	250S	180E	4301950038	19440	State	State	OW	S	
CHEVRON FED 1	24	290S	230E	4303730005	975	Federal	Federal	OW	S	
Threemile 12-7	12	290S	210E	4303750001	17837	Federal	Federal	OW	S	THREEMILE
LA SAL 29-28	29	290S	230E	4303750002	17920	Federal	Federal	OW	S	
CANE CREEK UNIT 16-2-25-18	16	250S	180E	4301950046	19512	State	State	OW	TA	CANE CREEK

# WESCO OPERATING, INC.

O I L & G A S O P E R A T I O N S

April 8, 2016

John Rogers  
Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210 Box 145801  
Salt Lake City, Utah 84114

RECEIVED  
APR 12 2016  
DIV. OF OIL, GAS & MINING

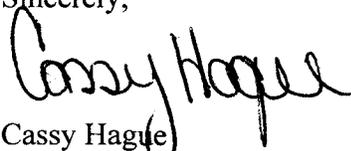
RE: Change of Operator

- A) Wells
  - B) APD'S
  - C) Dubinky Booster Station
  - D) Blue Hills Gas Plant
  - E) Dead Horse Lateral Pipeline
  - F) Authority to Inject
- Sundry Notices

Dear John Rodgers,

Please find enclosed the following documents from Fidelity Exploration & Production Company to Wesco Operating, Inc for your further handing. If you have any further questions please contact us..

Sincerely,



Cassy Hague  
307-577-5337

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>See Attached Exhibit</b>
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>See Attached Exhibit</b>
		7. UNIT or CA AGREEMENT NAME: <b>See Attached Exhibit</b>
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____	8. WELL NAME and NUMBER: <b>See Attached Exhibit</b>	
2. NAME OF OPERATOR: <b>Fidelity Exploration &amp; Production Company</b>		9. API NUMBER:
3. ADDRESS OF OPERATOR: 1801 California St., STE 250 CITY Denver STATE CO ZIP 80202	PHONE NUMBER: <b>(303) 893-3133</b>	10. FIELD AND POOL, OR WILDCAT: <b>See Attached Exhibit</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>See attached exhibit for all wells and details</b>		COUNTY: <b>Grand</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____		STATE: <b>UTAH</b>

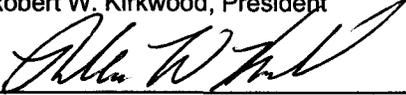
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: <u>3/1/2016</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

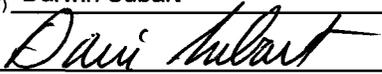
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective March 1, 2016, Fidelity Exploration & Production Company (Operator Number N1355) resigns as Operator of the wells listed on the attached exhibit and Wesco Operating, Inc. has been designated as successor Operator.

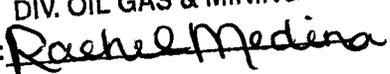
Wesco Operating, Inc.  
P.O. Box 1650  
Casper, Wyoming 82602  
Phone 307-265-5178

Fidelity Exploration & Production Company  
1801 California Street, Suite 2500  
Denver, Colorado 80202  
Phone 303-893-3133

Wesco Operating, Inc.  
Robert W. Kirkwood, President  
  
Signature

NAME (PLEASE PRINT) <u>Darwin Subart</u>	TITLE <u>Chief Financial Officer</u>
SIGNATURE 	DATE <u>4/4/2016</u>

(This space for State use only) **BLM:**

**APPROVED**  
**APR 21 2016**  
DIV. OIL GAS & MINING  
BY: 

**Fidelity Exploration & Production Company Paradox Well & APD List**

<u>Entity #</u>	<u>API #</u>	<u>Permitted Well Name</u>	<u>AKA Well Name</u>	<u>Township</u>	<u>Range</u>	<u>Section(s)</u>	<u>County</u>	<u>State</u>	<u>Mineral</u>	<u>Surface</u>	<u>Well Type</u>	<u>Well Status</u>
14506	4301931310	KANE SPRINGS FED 27-1	KANE SPRINGS FED 27-1-25-19	25S	19E	27	GRAND	UT	Federal	Federal	OW	P ✓
14505	4301931324	KANE SPRINGS FED 19-1A	KANE SPRINGS FED 19-1A-ST-26-20	26S	20E	19	GRAND	UT	Federal	Federal	OW	P ✓
14509	4301931331	KANE SPRINGS FED 10-1	KANE SPRINGS FED 10-1-25-18	25S	18E	10	GRAND	UT	Federal	Federal	OW	P ✓
14506	4301931334	KANE SPRINGS FED 25-19-34-1	KANE SPRINGS FED 25-19-34-1	25S	19E	34	GRAND	UT	Federal	Federal	OW	P ✓
	4301931341	KANE SPRINGS 16-1-25-18	Disposal Well	25S	18E	16	GRAND	UT	State	State	SWD	P ✓
14505	4301931396	CANE CREEK 2-1	CANE CREEK UNIT 2-1-26-19	26S	19E	2	GRAND	UT	State	State	OW	P ✓
14505	4301931446	CANE CREEK 1-1	CANE CREEK UNIT 1-1-26-19	26S	19E	1	GRAND	UT	Federal	Federal	OW	P ✓
14505	4301950009	CANE CREEK UNIT 12-1	CANE CREEK UNIT 12-1-26-19	26S	19E	12	GRAND	UT	Federal	Federal	OW	P ✓
18923	4301950010	CANE CREEK UNIT 7-1	CANE CREEK UNIT 7-1-26-20	26S	20E	7	GRAND	UT	Federal	Federal	OW	P ✓
14506	4301950011	CANE CREEK UNIT# 26-2	CANE CREEK UNIT 26-2-25-19	25S	19E	26	GRAND	UT	Federal	Federal	OW	P ✓
14505	4301950012	CANE CREEK UNIT #18-1	CANE CREEK UNIT 18-1-26-20	26S	20E	18	GRAND	UT	Federal	Federal	OW	P ✓
14505	4301950014	CANE CREEK U #13-1	CANE CREEK UNIT 13-1-26-19	26S	19E	13	GRAND	UT	Federal	Federal	OW	P ✓
14506	4301950019	CANE CREEK UNIT 26-3	CANE CREEK UNIT 26-3-25-19	25S	19E	26	GRAND	UT	Federal	Federal	OW	P ✓
18681	4301950020	CANE CREEK UNIT 28-2	CANE CREEK UNIT 28-2-25-19	25S	19E	28	GRAND	UT	Federal	Federal	OW	P ✓
14505	4301950027	Cane Creek Unit 18-2	CANE CREEK UNIT 18-2-26-20	26S	20E	18	GRAND	UT	Federal	Federal	OW	P ✓
18980	4301950028	Cane Creek Unit 17-1	CANE CREEK UNIT 17-1-26-20	26S	20E	17	GRAND	UT	Federal	Federal	OW	P ✓
19057	4301950030	Cane Creek Unit 36-1	CANE CREEK UNIT 36-1-25-19	25S	19E	36	GRAND	UT	State	State	OW	P ✓
14505	4301950032	Cane Creek Unit 17-2	CANE CREEK UNIT 17-2-26-20	26S	20E	17	GRAND	UT	Federal	Federal	OW	P ✓
19527	4301950033	Cane Creek Unit 36-2H	CANE CREEK UNIT 36-2H-25-19	25S	19E	36	GRAND	UT	State	State	OW	P ✓
19342	4301950034	Cane Creek Unit 24-2H	CANE CREEK UNIT 24-2-26-19	26S	19E	24	GRAND	UT	Federal	Federal	OW	P ✓
19528	4301950035	Cane Creek Unit 36-3H	CANE CREEK UNIT 36-3H-25-19	25S	19E	36	GRAND	UT	State	State	OW	P ✓
19396	4301950037	Cane Creek Unit 32-1-25-19	CANE CREEK UNIT 32-1-25-19	25S	19E	32	GRAND	UT	State	State	OW	P ✓
19767	4301950045	Cane Creek Unit 28-3	CANE CREEK UNIT 28-3-25-19	26S	19E	28	GRAND	UT	Federal	Federal	OW	P ✓
19588	4301950049	Cane Creek 32-1-25-20	CANE CREEK 32-1-25-20	25S	20E	32	GRAND	UT	State	State	OW	P ✓
11356	4303731658	HATCH POINT 1	HATCH POINT FEDERAL 1	29S	21E	14	SAN JUAN	UT	Federal	Federal	OW	P ✓ 26-P
17276	4303731857	THREEMILE 43-18H	THREEMILE UNIT 43-18H-29-22	29S	22E	18	SAN JUAN	UT	Federal	Federal	OW	P ✓
19706	4301950051	Cane Creek Unit 7-2-26-20	CANE CREEK UNIT 7-2-26-20	26S	20E	7	GRAND	UT	Federal	Federal	OW	OPS ✓
17984	4303750003	THREEMILE 16-17	THREEMILE UNIT 16-17-29-22	29S	22E	16	SAN JUAN	UT	State	State	OW	OPS ✓ 3 OPS
19646	4303750069	Three Mile Unit 12-2-29-21	THREE MILE UNIT 12-2-29-21	29S	21E	12	SAN JUAN	UT	Federal	Federal	OW	OPS ✓
19343	4301950036	CANE CREEK UNIT 2-1-25-18	CANE CREEK UNIT 2-1-25-18	25S	18E	2	GRAND	UT	Federal	State	OW	TA ✓ 2TA
19512	4301950046	CANE CREEK UNIT 16-2-25-18	CANE CREEK UNIT 16-2-25-18	25S	18E	16	GRAND	UT	State	State	OW	TA ✓
674	4301915925	LONG CANYON 1	LONG CANYON 1	26S	20E	9	GRAND	UT	Federal	Federal	OW	S ✓
14505	4301931447	CANE CREEK 24-1	CANE CREEK UNIT 24-1-26-19	26S	19E	24	GRAND	UT	Federal	Federal	OW	S ✓
16464	4301931449	CANE CREEK 8-1	CANE CREEK UNIT 8-1-26-20	26S	20E	8	GRAND	UT	Federal	Federal	OW	S ✓
19440	4301950038	Cane Creek 36-1-25-18	CANE CREEK 36-1-25-18	25S	18E	36	GRAND	UT	State	State	OW	S ✓
975	4303730005	CHEVRON FED 1	CHEVRON FEDERAL 1H	29S	23E	24	SAN JUAN	UT	Federal	Federal	OW	S ✓ 7-S
17837	4303750001	Threemile 12-7	THREEMILE UNIT 12-7-29-21	29S	21E	12	SAN JUAN	UT	Federal	Federal	OW	S ✓
17920	4303750002	LA SAL 29-28	LA SAL UNIT 29-28-29-23	29S	23E	29	SAN JUAN	UT	Federal	Federal	OW	S ✓
	4301950044	CANE CREEK UNIT 2-2-25-18		250S	180E	2	GRAND	UT	State	State	OW	APD ✓
	4301950048	Cane Creek Unit 25-1-25-19		250S	190E	25	GRAND	UT	Federal	Federal	OW	APD ✓
	4301950052	Cane Creek Unit 6-1-25-19		250S	190E	6	GRAND	UT	Federal	Federal	OW	APD ✓
	4301950053	Cane Creek Unit 29-1-25-19		250S	190E	29	GRAND	UT	Federal	Federal	OW	APD ✓ 2APD
	4301950054	Cane Creek 10-1-25-19		250S	190E	10	GRAND	UT	Federal	Federal	OW	APD ✓
	4301950055	Cane Creek Unit 30-1-25-19		250S	190E	30	GRAND	UT	Federal	Federal	OW	APD ✓
	4301950056	Cane Creek Unit 19-2-26-20		260S	200E	19	GRAND	UT	Federal	Federal	OW	APD ✓

<u>Entity #</u>	<u>API #</u>	<u>Permitted Well Name</u>	<u>AKA Well Name</u>	<u>Township</u>	<u>Range</u>	<u>Section(s)</u>	<u>County</u>	<u>State</u>	<u>Mineral</u>	<u>Surface</u>	<u>Well Type</u>	<u>Well Status</u>
4301950057		Cane Creek Unit 14-1-25-19		250S	190E	14	GRAND	UT	Federal	Federal	OW	APD ✓
4301950058		Cane Creek Unit 2-3-25-18		250S	180E	2	GRAND	UT	Federal	State	OW	APD ✓
4301950059		Cane Creek Unit 16-3-25-18		250S	180E	16	GRAND	UT	Federal	State	OW	APD ✓
4301950060		Cane Creek Unit 19-1-25-19		250S	190E	19	GRAND	UT	Federal	Federal	OW	APD ✓
4301950061		Cane Creek Unit 32-2-25-19		250S	190E	32	GRAND	UT	State	State	OW	APD ✓
4301950062		Cane Creek Unit 17-1-25-19		250S	190E	17	GRAND	UT	Federal	Federal	OW	APD ✓
4301950063		Cane Creek Unit 16-4-25-18		250S	180E	16	GRAND	UT	Federal	State	OW	APD ✓
4301950064		Cane Creek Unit 2-4-25-18		250S	180E	2	GRAND	UT	Federal	State	OW	APD ✓
4301950065		Cane Creek Unit 5-1-25-18		250S	180E	5	GRAND	UT	Federal	Federal	OW	APD ✓
4301950068		8-2-26-20		260S	200E	8	GRAND	UT	Federal	Federal	OW	APD ✓
4301950069		Cane Creek Unit 19-3-26-20		260S	200E	19	GRAND	UT	Federal	Federal	OW	APD ✓
4301950070		Cane Creek Unit 21-1-25-19		250S	190E	21	GRAND	UT	Federal	Federal	OW	APD ✓
4301950071		Cane Creek Unit 12-2-26-19		260S	190E	12	GRAND	UT	Federal	Federal	OW	APD ✓
4301950072		Cane Creek Unit 26-4-25-19		250S	190E	26	GRAND	UT	Federal	Federal	OW	APD ✓
4301950073		Cane Creek Unit 21-1-25-18		250S	180E	21	GRAND	UT	Federal	Federal	OW	APD ✓
4301950074		Cane Creek Unit 9-1-25-18		250S	180E	9	GRAND	UT	Federal	Federal	OW	APD ✓
4301950075		Cane Creek Unit 7-1-25-19		250S	190E	7	GRAND	UT	Federal	Federal	OW	APD ✓
4301950076		Cane Creek Unit 5-2-25-18		250S	180E	5	GRAND	UT	Federal	Federal	OW	APD ✓
4301950077		Cane Creek Unit 7-1-25-18		250S	180E	7	GRAND	UT	Federal	Federal	OW	APD ✓
4301950078		Cane Creek Unit 13-1-25-18		250S	180E	13	GRAND	UT	Federal	Federal	OW	APD ✓
4303750070		Three Mile Unti 12-3-29-21		290S	210E	12	SAN JUAN	UT	Federal	Federal	OW	APD ✓
4303750071		Three Mile Unit 16-2-29-22		290S	220E	16	SAN JUAN	UT	Federal	State	OW	APD ✓
4301950036		CANE CREEK UNIT 2-1-25-18H2		25S	18E	2	GRAND	UT	Federal	State	OW	APD ✓

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**Request to Transfer Application or Permit to Drill**

(This form should accompany a Sundry Notice, Form 9, requesting APD transfer)

<b>Well name:</b>	See attached well list
<b>API number:</b>	
<b>Location:</b>	Qtr-Qtr:                      Section:                      Township:                      Range:
<b>Company that filed original application:</b>	Fidelity Exploration & Production Company
<b>Date original permit was issued:</b>	
<b>Company that permit was issued to:</b>	Fidelity Exploration & Production Company

Check one	Desired Action:
<input type="checkbox"/>	<b>Transfer pending (unapproved) Application for Permit to Drill to new operator</b>
	The undersigned as owner with legal rights to drill on the property, hereby verifies that the information as submitted in the pending Application for Permit to Drill, remains valid and does not require revision. The new owner of the application accepts and agrees to the information and procedures as stated in the application.
<input checked="" type="checkbox"/>	<b>Transfer approved Application for Permit to Drill to new operator</b>
	The undersigned as owner with legal rights to drill on the property as permitted, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.	Yes	No
If located on private land, has the ownership changed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> If so, has the surface agreement been updated?	<input type="checkbox"/>	<input type="checkbox"/>
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any changes to the access route including ownership or right-of-way, which could affect the proposed location?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the approved source of water for drilling changed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is bonding still in place, which covers this proposed well? Bond No. _____	<input type="checkbox"/>	<input type="checkbox"/>

Any desired or necessary changes to either a pending or approved Application for Permit to Drill that is being transferred, should be filed on a Sundry Notice, Form 9, or amended Application for Permit to Drill, Form 3, as appropriate, with necessary supporting information as required.

Name (please print) Robert W. Kirkwood Title President  
 Signature *Robert W. Kirkwood* Date 4/4/10  
 Representing (company name) Wesco Operating, Inc.

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

**Fidelity Exploration & Production Company Paradox APD List**

<u>Date Issued</u>	<u>API #</u>	<u>Permitted Well Name</u>	<u>Township</u>	<u>Range</u>	<u>Section(s)</u>	<u>County</u>	<u>State</u>	<u>Mineral</u>	<u>Surface</u>	<u>Well Type</u>	<u>Well Status</u>
3/4/2014	4301950044	CANE CREEK UNIT 2-2-25-18	250S	180E	2	GRAND	UT	State	State	OW	APD
2/19/2015	4301950048	Cane Creek Unit 25-1-25-19	250S	190E	25	GRAND	UT	Federal	Federal	OW	APD
6/26/2014	4301950052	Cane Creek Unit 6-1-25-19	250S	190E	6	GRAND	UT	Federal	Federal	OW	APD
6/26/2014	4301950053	Cane Creek Unit 29-1-25-19	250S	190E	29	GRAND	UT	Federal	Federal	OW	APD
6/26/2014	4301950054	Cane Creek 10-1-25-19	250S	190E	10	GRAND	UT	Federal	Federal	OW	APD
6/26/2014	4301950055	Cane Creek Unit 30-1-25-19	250S	190E	30	GRAND	UT	Federal	Federal	OW	APD
6/26/2014	4301950056	Cane Creek Unit 19-2-26-20	260S	200E	19	GRAND	UT	Federal	Federal	OW	APD
6/26/2014	4301950057	Cane Creek Unit 14-1-25-19	250S	190E	14	GRAND	UT	Federal	Federal	OW	APD
7/21/2014	4301950058	Cane Creek Unit 2-3-25-18	250S	180E	2	GRAND	UT	Federal	State	OW	APD
8/6/2014	4301950059	Cane Creek Unit 16-3-25-18	250S	180E	16	GRAND	UT	Federal	State	OW	APD
8/6/2014	4301950060	Cane Creek Unit 19-1-25-19	250S	190E	19	GRAND	UT	Federal	Federal	OW	APD
9/22/2014	4301950061	Cane Creek Unit 32-2-25-19	250S	190E	32	GRAND	UT	State	State	OW	APD
7/30/2014	4301950062	Cane Creek Unit 17-1-25-19	250S	190E	17	GRAND	UT	Federal	Federal	OW	APD
8/12/2014	4301950063	Cane Creek Unit 16-4-25-18	250S	180E	16	GRAND	UT	Federal	State	OW	APD
9/24/2014	4301950064	Cane Creek Unit 2-4-25-18	250S	180E	2	GRAND	UT	Federal	State	OW	APD
9/2/2014	4301950065	Cane Creek Unit 5-1-25-18	250S	180E	5	GRAND	UT	Federal	Federal	OW	APD
11/25/2014	4301950068	8-2-26-20	260S	200E	8	GRAND	UT	Federal	Federal	OW	APD
12/19/2014	4301950069	Cane Creek Unit 19-3-26-20	260S	200E	19	GRAND	UT	Federal	Federal	OW	APD
1/14/2015	4301950070	Cane Creek Unit 21-1-25-19	250S	190E	21	GRAND	UT	Federal	Federal	OW	APD
1/13/2015	4301950071	Cane Creek Unit 12-2-26-19	260S	190E	12	GRAND	UT	Federal	Federal	OW	APD
1/13/2015	4301950072	Cane Creek Unit 26-4-25-19	250S	190E	26	GRAND	UT	Federal	Federal	OW	APD
1/14/2015	4301950073	Cane Creek Unit 21-1-25-18	250S	180E	21	GRAND	UT	Federal	Federal	OW	APD
1/20/2015	4301950074	Cane Creek Unit 9-1-25-18	250S	180E	9	GRAND	UT	Federal	Federal	OW	APD
1/14/2015	4301950075	Cane Creek Unit 7-1-25-19	250S	190E	7	GRAND	UT	Federal	Federal	OW	APD
1/20/2015	4301950076	Cane Creek Unit 5-2-25-18	250S	180E	5	GRAND	UT	Federal	Federal	OW	APD
1/14/2015	4301950077	Cane Creek Unit 7-1-25-18	250S	180E	7	GRAND	UT	Federal	Federal	OW	APD
1/14/2015	4301950078	Cane Creek Unit 13-1-25-18	250S	180E	13	GRAND	UT	Federal	Federal	OW	APD
7/8/2014	4303750070	Three Mile Unti 12-3-29-21	290S	210E	12	SAN JUAN	UT	Federal	Federal	OW	APD
10/2/2014	4303750071	Three Mile Unit 16-2-29-22	290S	220E	16	SAN JUAN	UT	Federal	State	OW	APD
12/16/2014	4301950036	Cane Creek Unit 2-1-25-18 H2	25S	18E	2	GRAND	UT	Federal	State	OW	APD

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

5. LEASE DESIGNATION AND SERIAL NUMBER:  
**UTU-90108**

**SUNDRY NOTICES AND REPORTS ON WELLS**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

8. WELL NAME and NUMBER:  
**Blue Hills Gas Plant**

9. API NUMBER:

10. FIELD AND POOL, OR WILDCAT:

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER Blue Hills Gas Plant

2. NAME OF OPERATOR:  
**Fidelity Exploration & Production Company**

3. ADDRESS OF OPERATOR:  
1801 California St., STE 2500 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 893-3133

4. LOCATION OF WELL  
FOOTAGES AT SURFACE: \_\_\_\_\_ COUNTY: Grand  
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: \_\_\_\_\_ STATE: UTAH

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>3/1/2016</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
Effective March 1, 2016, Fidelity Exploration & Production Company (Operator Number N1355) resigns as Operator of the Blue Hills Gas Plant located in T23S-R19E, Sections 20, 29. Wesco Operating, Inc. has been named as successor Operator.

Wesco Operating, Inc.  
P.O Box 1650  
Casper, Wyoming 82602  
Phone 307-265-5178

Fidelity Exploration & Production Company  
1801 California Street, Suite 2500  
Denver, Colorado 80202  
Phone 303-893-3133

Wesco Operating, Inc.  
Robert W. Kirkwood, President

Signature *Robert W. Kirkwood*

NAME (PLEASE PRINT) Darwin Subart TITLE Chief Financial Officer  
SIGNATURE *Darwin Subart* DATE 4/14/2016

(This space for State use only)

**APPROVED**  
**APR 21 2016**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

		5. LEASE DESIGNATION AND SERIAL NUMBER:
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>Compressor Booster Station</u>		8. WELL NAME and NUMBER: <b>Dubinky Booster Station</b>
2. NAME OF OPERATOR: <b>Fidelity Exploration &amp; Production Company</b>		9. API NUMBER:
3. ADDRESS OF OPERATOR: 1801 California St., STE 2500 CITY <u>Denver</u> STATE <u>CO</u> ZIP <u>80202</u>		10. FIELD AND POOL, OR WLD/CAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE:		COUNTY: <b>Grand</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>3/1/2016</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion:	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

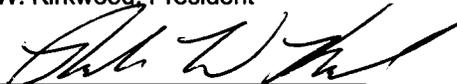
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

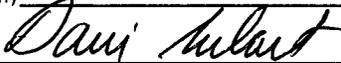
Effective March 1, 2016, Fidelity Exploration & Production Company (Operator Number N1355) resigns as Operator of the Dubinky Booster Station located along Dubinky Road, approximately 18 miles northwest of Moab, 599142 E 4280872 N UTM Zone 12, NAD83. Wesco Operating, Inc. has been named as successor Operator.

Wesco Operating, Inc.  
P.O. Box 1650  
Casper, Wyoming 82602  
Phone 307-265-5178

Fidelity Exploration & Production Company  
1801 California Street, Suite 2500  
Denver, Colorado 80202  
Phone 303-893-3133

Wesco Operating, Inc.  
Robert W. Kirkwood, President

  
\_\_\_\_\_  
Signature

NAME (PLEASE PRINT) <u>Darwin Subart</u>	TITLE <u>Chief Financial Officer</u>
SIGNATURE 	DATE <u>4/4/2016</u>

(This space for State use only)

**APPROVED**

**APR 21 2016**

DIV OIL GAS & MINING  
BY: 